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45TH CONGRESS, } HOUSE OF REPRESENTATIVES. { Ex. Doc. 32,
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TREASURY DEPARTMENT.

REPORT
ON THE
INTERNAL COMMERCE
OF THE
UNITED STATES,

BY
JOSEPH NIMMO, JR.,
CHIEF OF THE BUREAU OF STATISTICS, TREASURY DEPARTMENT.

SUBMITTED DECEMBER 1, 1879.

COMMERCE AND NAVIGATION.

WASHINGTON:
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THE INTERNAL COMMERCE OF THE UNITED STATES.

TREASURY DEPARTMENT,
Bureau of Statistics, December 1, 1879.

SIR: I have the honor to submit to you the following report on the internal commerce of the United States, prepared under the provisions of the act of March 3, 1875.

The various commercial movements of the country differ widely, both with respect to the commodities transported, and to the circumstances surrounding them. The commercial interests of the great trade-centers also differ in many respects. Interests, which in one city are paramount and controlling, are frequently found to be secondary and of small influence in another city of equal or even greater commercial importance. Any comparative statement or aggregation of statistics prepared without regard to these important considerations would, of course, have tended to obscure rather than to advance a knowledge of our internal commerce. It was therefore clearly seen that the subject could be properly presented only by means of carefully-prepared statements, accompanied by illustrative statistics and other facts somewhat in detail.

It was essential also, in considering the various trade and transportation interests, that they should be regarded not merely as local questions, but in their relations to the general commerce of the country, both internal and foreign. Evidently, therefore, any intelligent presentation of this great and complex subject necessarily involved a large amount of work in the nature of an investigation. The present and a former report on internal commerce are largely the result of my personal efforts in this direction.

It was impossible to determine, in advance, the length of time which would be required for the accomplishment of an unorganized work like this, the scope and limits of which had to be determined as it progressed. This fact and the preceding remarks, furnish my explanation of the apparent delay in the preparation of this report.

During the progress of the investigations which have been made, a large amount of data has been collected for the next report on the internal commerce of the country.

Methods of procuring and presenting data having now been determined upon, it is intended that future reports shall appear soon after the close of each fiscal year.

In the preparation of the present report, statistics of production are given in cases where they have an important bearing upon commerce.

The statistical information at my command in regard to foreign commerce has been of great advantage in the preparation of this report.

I am, sir, very respectfully, yours,

JOSEPH NIMMO, JR.,

Chief of Bureau.

Hon. JOHN SHERMAN,

Secretary of the Treasury.

1.—INTRODUCTION.

It has been the principal object in the preparation of this report, to present a description of the more important movements of the internal commerce of the United States, and to explain some of the principal conditions controlling and governing those movements.

As railroads have become the principal highways of the internal commerce of the country, it has been deemed proper to enter somewhat at length upon the consideration of their relations to the interests of trade.

The growth of the traffic on railroads is indicated by the fact that the total freight movement of three of the most important trunk lines connecting the West with the seaboard, increased from 10,898,989 tons in 1868, to 25,272,755 tons in 1878.

The rapidly-growing importance of railroads as highways of commerce has been due mainly to improvements securing increased safety and greater speed and regularity of movement, to arrangements entered into for direct shipments between distant points over connecting lines, and to reduction in the cost of transportation. The average cost of transportation on ten of the principal lines of the country fell from $2\frac{3}{10}$ cents per ton per mile in 1868, to .95 cents per ton per mile in 1878.

The advances made in railroad transportation have been the result of improved methods of administration, the substitution of steel for iron rails, and the adoption of many other devices and instrumentalities.

The habits of the people of this country have, in their social and commercial interests, become conformed to the exigencies of railroad transportation. New trade currents have thus been formed, and in many cases there has been an entire reversal of the course of trade.

These changes and developments have also been largely the result of the establishment of facilities for the direct shipment of merchandise on through bills of lading over connecting roads, and of similar arrangements entered into between railroads and ocean-steamer lines for direct trade between interior points in the United States and foreign countries.

The growth of manufacturing industries throughout the Middle, Western, and Northwestern States has also tended to produce important changes in the course of our internal commerce.

The statement of a few of the more important of these changes and developments will serve to illustrate the whole subject.

CHANGES IN THE COURSE OF INTERNAL COMMERCE.

Seven-eighths of the surplus products of the trans-Mississippi States, north of the State of Arkansas, now cross the Mississippi River on railroads at and between Saint Louis, Mo., and Saint Paul, Minn., and are transported directly East to markets in this country and in foreign countries. During the year 1878 the eastward shipments from Saint Louis by rail exceeded the southern shipments from that city by the Mississippi River.

The cities of Saint Louis and New Orleans were formerly closely identified in almost all their trade interests, but they are now sharply at rivalry with respect to the trade of Southern Missouri, Arkansas, Northern Louisiana, and a large part of the trade of Texas.

The four principal east and west trunk lines leading from the Atlantic seaboard, with their western connections to Chicago, Saint Louis, Louisville, and Cincinnati, now constitute the most important avenues of commerce in this country; and the trade currents which pass over them largely influence the course of our entire internal commerce, as well as the course of our foreign trade, with respect to the ports at which foreign goods are imported and domestic products are exported.

These great east and west currents of trade have led to a radical change in the course of the trade of the States situated south of the Ohio River and south of the State of Missouri.* The cities of Saint Louis, Louisville, and Cincinnati now control at least two-thirds of the trade of those States in general merchandise, and have, therefore, become their chief commercial entrepôts. For this trade these cities compete actively with Mobile, New Orleans, and Galveston. Taken collectively, Saint Louis, Louisville, and Cincinnati greatly surpass Mobile, New Orleans, and Galveston in population, in the magnitude of their commerce, and in various elements of commercial power. In the competition for the trade of the States referred to, the three interior cities possess an important advantage in their rapidly developing manufacturing industries, the value of the products of which, during the year 1878, is estimated at \$418,000,000, or nearly as much as the total value of the imports into the United States from foreign countries. With respect to such manufactures, these cities naturally exercise a much larger degree of control over Southern trade than with respect to their merely distributive commerce.

The cities of Saint Louis, Louisville and Cincinnati now draw their supplies of domestic merchandise principally from the Atlantic seaports, namely: Boston, New York, Philadelphia, and Baltimore, and from manufactories in the New England States and in the Middle and Western States. Imported goods sold at these three cities of the West are chiefly received from or through the Atlantic seaports whence they are transported by rail.

* The States referred to are Kentucky, Tennessee, Northern Georgia, Alabama, Mississippi, Louisiana, Texas, and Arkansas

The city of Cincinnati will probably greatly enlarge her Southern trade, as the result of the recent completion of the Cincinnati Southern Railroad to Chattanooga, Tenn., at which point it connects with the railroads of the South Atlantic and Gulf States.

There has been a rapid growth in the shipment of cotton from the cotton-growing States to or through Saint Louis, Louisville, and Cincinnati, and thence over the east and west trunk-lines to Atlantic seaports and to manufactories in the New England States and other States of the Atlantic seaboard.

By the extension of the western connections of the Baltimore and Ohio Railroad to Cincinnati, Louisville and Saint Louis, the cities of Baltimore and New Orleans have become active competitors both for the purchase of Western produce, and for supplying to the cities of Saint Louis, Louisville and Cincinnati, imported goods and products of manufacture of the Atlantic seaboard States. In like manner the cities of Philadelphia, New York and Boston compete with New Orleans for trade, not only at Saint Louis, Louisville and Cincinnati, but also at many points throughout the Southern States. These facts indicate an important change in the course of the trade of the Southern States alluded to.

Other facts indicative of the changes which have taken place in the circumstances surrounding the internal commerce of the country are stated in the body of this report.

RAILROAD POOLS.

The construction of competing lines between all the important points of the country led to a fierce struggle for traffic. For several years, wars of rates appeared to constitute the normal relation of railroads to each other with respect to competitive traffic. This was the direct result of remitting to an almost unlimited number of soliciting agents and local freight agents the power of making rates. During these contests, rates became not only unremunerative, but they often fell below the actual cost of transportation. Many agreements were entered into between railroad managers for the purpose of protecting themselves against themselves, but these arrangements were attended with little success. At last the pooling, or apportionment of traffic, or of the proceeds from traffic, was resorted to. This plan has been widely adopted and it now constitutes one of the most important features of the American railroad system. A few years ago, the formation of such gigantic railroad pools as those which exist to-day would have been regarded by the public with serious apprehension; but the evils incident to fluctuating rates, and the granting of special rates, became so intolerable that the people were prepared to welcome the establishment of pools, merely because they promised relief from these abuses so detrimental to the producing and commercial interests of the country. In what manner and to what extent pooling arrangements affect the public interest adversely, is one of the questions involved in the railroad problem of the present day.

Experience in the administration of pools may, in obedience to popular demands, lead to the correction of many causes of complaint. The influence exerted over competitive rates by the lines engaged in any particular pooling scheme is not absolute, but is more or less restricted both by the direct and the indirect competition of lines not included in such scheme, and the competition of trade forces. The water-lines formed by the lakes, the Erie Canal, and the Hudson River; by the lakes, the Canadian canals, and the Saint Lawrence River; and by the Mississippi River and its navigable tributaries, exercise a strong regulating influence not only over the rates which can possibly be secured as the result of any pooling or apportionment of traffic between competing lines, but also over rail rates generally.

DIRECT TRAFFIC OVER CONNECTING LINES.

The extension of our railroad system, in connection with the facilities which have been provided for direct trade over connecting roads on through bills of lading, has begotten a sharp and widely extended competition between commercial cities. The competition of trade forces is now a ruling element in the determination of the prices of commodities and the charges for their transportation. The limits of the purely local or exclusive trade of all commercial cities have become greatly contracted, while the limits of their competitive trade have been widely expanded. For example: The merchants of Chicago and Saint Louis enjoy the advantage of a large part of the trade of the States and Territories lying west of those cities; still, the merchants at all centers of trade throughout those States and Territories purchase goods at the great Atlantic seaports, and also at manufactories throughout the Northern and Eastern States. Surplus products of these States and Territories are also shipped directly on through bills of lading to interior points in the Atlantic seaboard States, and in the Southern and Southwestern States, and to foreign countries, without paying tribute to the trade interests of any interior trade center.

The efficiency of the railroads of the country as instruments of commerce is due, in a higher degree, to the arrangements which have been entered into for the conduct of joint or through traffic, than to any other feature of their existence.

As the result of providing such facilities for direct shipments, the railroad system now presents itself to the commercial interests of the country, with respect to a large part of our internal commerce, as a single organization, the tendency being constantly toward that almost perfect system of transmission, the postal service. As one of the most important results of these facilities, the prosperity of commercial cities is now, much more than formerly, determined by the power of capital and of enterprise, and less by geographical position or natural advantages of transportation.

Railroad companies have hitherto enjoyed almost unlimited privileges

as to the consolidation of their lines, and the formation of other combinations securing the advantages of direct traffic. Such combinations are generally found to subserve the interests of trade. The State and national governments have not only acceded to the formation of these combinations, but have also promoted them through legislative enactments. The general tendency of combinations for carrying on direct trade has been towards a reduction of transportation charges.

The facilities for direct transportation between distant points, in connection with the great differences which prevail as between "through" or "competitive," and "local" or "non-competitive rates," have exerted a very important influence upon the agricultural, the manufacturing, and the mining industries of the country. In certain States and sections these interests have been adversely affected, but the general result has been a large development of the industries and resources of the country.

VALUE OF THE INTERNAL COMMERCE OF THE UNITED STATES.

It is impossible to state accurately the total value of the internal commerce of the country. Measured by the value of the commodities transported, it is many times greater than our foreign commerce. The value of the commodities transported between Philadelphia and Pittsburgh on the Pennsylvania Railroad alone, during a single year, has exceeded the value of the imports into the United States from foreign countries.

In view of the vast extent of our territory, its immense undeveloped resources, the diversities which exist with respect to soil and climate, it appears probable that with the constant extension of railroads, the internal commerce of the country will increase more rapidly even than our foreign commerce.

So closely intermingled and so regardless of State lines are the currents of trade in this country, that it is impossible to express the value of our internal commerce by States or by sections. A very interesting illustrative comparison upon this subject is, however, afforded by the number of freight-cars employed on the railroads of each State and section of the country.

The full data upon this subject are presented in the table on page 253 of the Appendix.

The facts are stated summarily as follows:

	Number of freight cars.	Per cent.
New England	30, 538	7
Middle	205, 144	48
Southern	26, 407	6
Western and Southwestern	146, 785	35
Pacific	6, 676	2
Pacific railroads	7, 463	2
Total in the United States.....	423, 013	100

It appears that of the total number of freight cars employed on railroads in the United States, 7 per cent. belong to the companies in the New England States, 48 per cent. to companies in the Middle States, 6 per cent. to companies in the Southern States, 35 per cent. to companies in the Western and Southwestern States, and 4 per cent. to companies in the Pacific States and the Pacific Railroads.*

A much larger amount of traffic is transported with a given number of cars on the great trunk lines connecting the Western States with the Atlantic seaboard States, than on the railroads of other States. Therefore the tonnage transported on the railroads of the Middle and Western States is relatively larger even than is indicated by the above statement as to the proportion of cars employed in the different sections of the country.

GOVERNMENTAL REGULATIONS.

The complaints which have arisen in regard to the transportation interest of the country relate chiefly to discriminations. As discriminations are of the very essence of the conduct of human affairs, the practical question is not whether discriminations shall or shall not be permitted, but *how to discriminate*.

During the last ten years the subject of the governmental regulation of railroads has been agitated in various parts of the country, and in several of the States, railroad commissions have been formed. At the present time a thorough investigation of the question is being had in the State of New York.

Many difficulties of the character met with in this country as to the regulation of the railroads, have been adjusted in Great Britain through the operations of a technical tribunal known as the Board of Railway Commissioners.

The railroads of this country constitute a highly organized system of transportation. Their operations are, in the highest degree, "affected with a public interest." They touch every industry, and the facilities which they afford have become vital to the present order of social and commercial affairs. In the light of experience regarding the protection of the public interests, it appears to be a self-evident proposition that railroad management should be subjected to a rigid public scrutiny. This fact has been realized, not only in the United States, but in other countries. Aside from the exercise of any directing and administrative power over the ordinary conduct of railroad affairs, there is presented a large and important field for governmental interposition in the correction and prevention of abuses. The moral effect of the requirement that publicity shall be given to such facts relative to the operations of railroads as concern the public interests, in itself constitutes a most effective exercise

* These facts have been compiled from a statement published by H. V. Poor, Esq., of New York, in his *Manual on Railroads of the United States* for 1879.

of governmental authority. This has been proved in the regulation of railroads in Great Britain and in several of the States of this country.

In view of the fact that the railroad system of this country has become essentially a unity in all that relates to commerce among the States, and that by far the largest part of our internal commerce is inter-State commerce, it has been urged that the Government of the United States should exercise its authority for the correction of evils and abuses, under the constitutional power of Congress to regulate commerce among the States. A bill of this nature has twice passed the House of Representatives.

However effective State regulations of railroads may be in regard to matters of a police nature, and to local questions as to rates, they fall short of any possible determination of many questions which arise touching the relations of the railroads to the commerce of the whole country. In this view, the chief officers of several of the principal trunk lines of the country concur.

The practical question, therefore, presents itself as to whether the enormous interests involved in our inter-State commerce shall be determined solely by those who are engaged in the work of transportation, or whether the public judgment shall also be asserted through some intelligent and authoritative agency. The constitution of such an agency, the scope of its powers, and the manner in which those powers shall be exercised in harmony with the spirit of our institutions, constitute a difficult and complex question, which can be determined only in the light of such information as may be obtained through an intelligent and careful investigation of the whole subject by competent persons, under the authority of Congress.

The demand for information in regard to the rapidly increasing internal commerce of the country, especially in its inter-State or national aspects, and the paramount importance of the subject, appear to emphasize the importance of providing adequate means for the collection and annual publication of statistics and other facts in regard to it.

The foregoing introductory remarks are in the nature of a synopsis of the principal topics treated of in this report.

2.—THE COMMERCE ON THE MISSISSIPPI RIVER NORTH OF SAINT LOUIS, AND ON THE RAILROADS CROSSING THE MISSISSIPPI RIVER BETWEEN SAINT LOUIS AND SAINT PAUL.

It is proposed to present a comparison between the commerce of the Mississippi River between Saint Paul and Saint Louis, and the commerce passing over railroad bridges across that river between the same points. It is also proposed to consider the general features of this trans-Mississippi commerce, with a special view to furnishing illustrations of some of the more important conditions governing the course and the general conduct of the internal commerce of the country.

The statistics upon which this presentation of the subject is based,

have been furnished mainly by Col. Milo Smith, of Clinton, Iowa, a gentleman of large experience in the management of western railroad interests, and who has, for many years, carefully observed the agricultural and commercial development of the Western and Northwestern States.

In the following table is presented the tonnage moved east by rail across the Mississippi River during the years 1875 and 1878:

Freight moved east across the Mississippi River during the years 1875 and 1878.

Over bridges at—	During the year 1875.	During the year 1878.
	Tons.	Tons.
Winona	75,000	46,000
La Crosse	326,330	202,450
Prairie Du Chien	270,560	153,970
Dubuque	220,000	164,736
Sabula	35,833	36,636
Clinton	495,000	708,990
Davenport	412,728	743,460
Burlington	312,295	572,070
Keokuk	19,653	46,342
Quincy	97,640	175,752
Hannibal	43,605	121,379
Louisiana	36,710	182,053
Total	2,344,354	3,554,838

From the foregoing table it will be seen that the total tonnage moved east across the Mississippi River increased from 2,344,354 tons during 1875, to 3,554,838 tons during 1878, an increase of 1,210,484 tons, or 52 per cent. It will also be observed that there was a falling off in the tonnage crossing the railroad bridges of Northern Iowa and of Minnesota, but a large increase of tonnage crossing the river at the more southerly points. This is explained by the fact that there was almost an entire failure of the wheat crop of Northern Iowa and Minnesota during the year 1878, and that the crops of Southern Iowa, Nebraska and Kansas were quite large during that year. The increase of traffic over the more southerly bridges is also largely due to the great increase of the population of Southern Iowa, Nebraska and Kansas, during the last three years.

The tonnage of merchandise, not including lumber, which reached Saint Louis by river from the north, during the years 1875 and 1878, is stated by Mr. George H. Morgan, secretary of the Merchants' Exchange of that city, as follows:

	Tons.
In 1875	198,100
In 1878	174,065

This exhibits a decrease of 12 per cent.

The relative tonnage of merchandise moved east across the Mississippi River over railroad bridges, and of merchandise moved south, reaching Saint Louis by river, during the year 1878, was as follows:

	Tons.
Moved east by rail	3,554,838
Moved south by river	174,065

It appears, therefore, that the tonnage moved east by rail was more than twenty times the tonnage moved south by river.

From information, also furnished by Mr. Morgan, it appears that the shipments from Saint Louis east by rail across the Mississippi River, and the shipments south by river, during the year 1878, were as follows:

	Tons.
East, by rail	1, 029, 006
South, by river	434, 490

By adding the rail shipments towards the east from Saint Louis to the tonnage moved east by rail above Saint Louis, and considering the river tonnage to be represented by the total receipts at Saint Louis from the north and the total shipments at Saint Louis towards the south, we arrive at the following expression as to the amount of tonnage shipped east across the Mississippi River and shipped south on the Mississippi River, at and between Saint Louis and Saint Paul, during the year 1878:

	Tons.
Total tonnage moved east by rail	4, 583, 844
Total tonnage moved south by river	608, 555

From this it appears that the total eastward movement of tonnage by rail was more than seven times the southward movement by river.

Twenty-five years ago the entire trade of the country bordering on the Mississippi River above Saint Louis was confined to that river, and Saint Louis was the principal center of that trade. At that time no railroad had been completed from the seaboard to the Mississippi River, and the eastward movement of traffic might almost have been represented by zero. The simple statement of these facts, in connection with a statement as to the magnitude of the present eastward movement of commerce by rail, conveys the story of a development more remarkable than any other recorded in the history of commerce.

The relative tonnage of freight moved east and west by rail over the bridges across the Mississippi River, between Saint Paul, Minn., and Saint Louis, Mo., during the year 1878, was as follows:

Bridge at—	Moved east.	Moved west.
	Tons.	Tons.
Winona	46, 000	37, 000
La Crosse	202, 450	177, 810
Prairie Du Chien	153, 970	98, 750
Dubuque	164, 786	70, 383
Sabula	26, 636	25, 047
Clinton	709, 990	472, 530
Davenport	743, 460	540, 000
Burlington	572, 070	381, 380
Keokuk	48, 342	21, 609
Quincy	175, 752	117, 168
Hannibal	121, 379	12, 846
Louisiana	182, 053	96, 029
Total	3, 554, 838	2, 052, 612

It appears from this table that, of the total east and west tonnage, 63 per cent. was moved east, and 37 per cent. was moved west. This fact is characteristic of the general proportion of west-bound and east-bound tonnage moved over all the trunk-lines connecting the West with the seaboard.

The chief value as a highway of commerce at the present time of that part of the Mississippi River north of Saint Louis consists in the fact that it affords invaluable facilities for the rafting of lumber from the pineries of Wisconsin. The total lumber business on the Mississippi River amounted to 1,060,000,000 feet during the year 1875, and to 1,350,000,000 feet during the year 1878. During the year 1875, the proportion of lumber landed at towns along the river above Saint Louis, and of lumber which reached Saint Louis, was as follows:

	Feet.
Consumed at river towns, and shipped east and west from such towns by rail	958,782,120
Transported by river to Saint Louis	101,217,880

It appears, therefore, that 90 per cent. of the lumber moved during the year 1875 was landed at river towns above Saint Louis, and that only 10 per cent. reached that city.

During the year 1878 there was consumed at river towns and shipped east and west by rail from such towns above Saint Louis, 1,267,300,000 feet, and transported by river to Saint Louis, 82,700,000 feet. Of the total movement of lumber, 94 per cent. was landed at river towns above Saint Louis, and only 6 per cent. reached that city.

In order to secure uninterrupted rail communication between the trans-Mississippi States and Territories and the States situated east of that river, thirteen bridges have been constructed across the Mississippi River by railroad companies, at an aggregate cost of \$20,413,000, as follows:

Railroad bridges at—	
Winona	\$200,000
La Crosse	250,000
Prairie Du Chien (pile and boat)	120,000
Dubuque	800,000
Sabula (temporary)	20,000
Clinton	800,000
Davenport (built conjointly by the government and railroad company) ..	2,000,000
Burlington	800,000
Keokuk	800,000
Quincy	1,500,000
Hannibal	750,000
Louisiana	800,000
Saint Louis	11,573,000
Total	20,413,000

It is impossible in this connection to enter more fully upon the history of the growth of that great eastward current of trade which flows across the Mississippi River between the cities of Saint Paul, Minn., and Saint Louis, Mo., and which is largely concentrated at Chicago. It must suf-

fice to present a few of the more important facts in regard to the present conditions governing this eastward movement of traffic.

The principal demand for the surplus agricultural products of the Western and Northwestern States and Territories comes from the Atlantic seaboard States and from the countries of Europe.

The principal part of the produce business of the Northwestern States is now transacted in the most direct manner, and in the shortest possible space of time. Sales are generally made by farmers for the purpose of meeting present exigencies in the conduct of their business, or for the purpose of availing themselves of the immediate advantages of an opportunity for securing satisfactory prices for their produce. In either case there is a demand for quick returns. This habit of trade is the natural result of the facilities afforded for speedy and direct transportation by rail, and of the rapid diffusion of market news by means of the telegraph and the public press. The produce trade in these States is carried on by numerous small traders, who gather up produce by car-loads or smaller lots, and sell or consign to the large dealers at Chicago. The circumstances surrounding the agriculturists of the Northwest naturally give rise to a demand for a great and capacious market like Chicago, amply supplied not only with warehouses, depots, connecting tracks, and facilities for the cheap and rapid receipt and distribution of produce, but with the requisite available capital in the hands of merchants and bankers for the purchase of grain and provisions. No such facilities of capital, of commercial enterprise, of transportation, of storage, or of transfer exist at any of the Mississippi River towns, the available capital and the transfer and storage facilities at those towns being sufficient only for local demands.

Aside from any question as to the cost of transportation by river, the mere matter of time and of cost of transfer from railroad cars into boats prevents any deflection from the east and west railroads to the Mississippi River at the points of crossing. Besides, no more time or expense is involved in the transportation of produce from the Mississippi River by rail to Chicago than would be required for the transfer of such commodities from cars to boats at the river. On the other hand, there is a very large deflection of trade from the river to the railroads. Of the south-bound river tonnage which passed the railroad bridge at Dubuque during the year 1878, more than one-half stopped at Fulton and Rock Island, Ill., and was there transferred to railroads and carried to Chicago; and, as already stated, 94 per cent. of the entire quantity of lumber which passed down the Mississippi River during the year 1878 was landed at river towns above Saint Louis. These circumstances, in connection with the suspension of navigation on the Upper Mississippi during the winter months, the frequency of low water in that part of the river, and the lack of market towns on the river capable of handling a large quantity of produce, are the main conditions which determine the present course of the commerce of the trans-Mississippi River States.

These conditions also contribute largely towards constituting the city of Chicago the principal primary market for the surplus agricultural products of the Northwest.

Although the marketing of the produce of the Northwestern States at Chicago, at Milwaukee, and at other western points, must be regarded as the usual course of that trade, yet there is a constant tendency towards direct trade between points west of the Mississippi River and points east of Chicago, and also between such western points and ports in Europe. Such direct shipments are believed to be increasing, not only in amount, but also relatively, with respect to the growth of the trade of the primary markets of the West. Although the difference in cost between such direct shipments and the more usual method of shipment through the western markets is but a narrow one, yet it operates as an effectual regulator both of prices and of freight charges. Such direct shipments also operate strongly towards promoting that competition between the markets which, at the present time, constitute the ruling element of the internal commerce of the country.

Facilities for the direct transportation of western produce to interior points in the Atlantic seaboard States and to foreign countries are fully supplied by the railroads extending west from Chicago, as well as by the trunk-lines extending from Chicago to the Atlantic seaports and by ocean-steamer lines.

Although the railroads diverging from Chicago throughout the Western and Northwestern States are separate in ownership, and differ from the eastern trunk-lines in the more important economic conditions which determine their management, yet the demands of trade for facilities of direct transportation have caused the managers of those Western lines to enter into combinations with the trunk-lines to the East as to through rates, and as to the transfer of freight from the lines of one company to those of another without any supervision on the part of the shipper. The demand for direct shipments has also caused those managers, in some cases, to allow the eastern trunk-lines to send their cars into the States and Territories west of Chicago, where they are loaded and dispatched to the Atlantic seaports, or to interior points in the Atlantic seaboard States, without any of the expenses incident to transshipment from the cars of one company to those of another. In the case of direct shipments to foreign countries, through-line cars make direct connections with ocean steamers at the wharves of seaboard cities. These facilities for direct shipments afford invaluable advantages to the agriculturists of the Northwestern States.

The following interesting and instructive statement in regard to the subject of direct shipments of western produce is presented by Col. Milo Smith, of Clinton, Iowa, in his report to this office:

There are many indications of an increase in through shipments. Very many of the manufacturing establishments of Iowa are now shipping their products direct to European markets. At various points in the State oat-meal mills have been established, and a very large proportion of their entire product is shipped direct to Scotland

or to England, and the pork-packers of the State ship direct to Ireland a large percentage of their goods. These shipments are made in through cars, from the point of manufacture to the seaboard at Boston, New York, Baltimore, and Philadelphia on through bills of lading covering ocean transportation. Shipments by this method are constantly increasing. It is not an uncommon thing for live stock to start from points west of the Mississippi River direct for European markets, without any change of ownership until sold to the consumers on the other side of the Atlantic. Quite frequently the men in charge of live stock make the entire journey from Iowa to Europe and deliver cattle to the purchasers there.

The shipments on through bills of lading are increasing from year to year, and it is not improbable that the time will come, within a very few years, when a very large portion of the business west of the Mississippi River will be done in through cars to the seaboard and on through bills of lading to foreign ports. The economy of time and expense will make this the favorite way of doing the business. It is not unreasonable to look forward to the time when the trunk lines running from the seaboard to Chicago will control the main trunk lines west of Chicago. Then the practice will prevail of loading all the products along the road in through cars for an eastern market, and the rates of transportation from all interior points to the seaboard will be made without reference to any intermediate points. The active competition between the trunk lines east of Chicago and the water transportation to the seaboard will always make the rates as low as possible, and will compel all the lines to avoid transshipment and all unnecessary expense in getting the products from the producer to the coast.

It is proper to state, in concluding the consideration of this subject, that an exceedingly small proportion of the grain and produce of the States lying west of the Mississippi River passes through Chicago without being marketed at that point. Direct shipments from the trans-Mississippi States through Chicago probably constitute, at the present time, less than 2 per cent. of the total eastward movement of grain and produce from those States. It is, however, impossible to collect precise data upon the subject. It seems probable that the advantages afforded to the Western and Northwestern States, by virtue of the circumstances surrounding their agricultural and commercial interests, will always secure to the markets of Chicago very much the larger portion of the eastward movement of agricultural products on all those railroads which radiate from that city throughout the Western and Northwestern States.

3.—THE COMMERCIAL AND TRANSPORTATION INTERESTS OF THE CITY OF SAINT LOUIS.

In the first report of this bureau on internal commerce, attention was more especially directed to the movements of commerce east of the Mississippi River. It appears proper, therefore, in the present report to enter somewhat at length upon the consideration of the commerce of Saint Louis, from the fact that that city is the chief center of trade west of the Mississippi River and east of the Rocky Mountains.

On pages 226 to 240 of the Appendix may be found statistical and other information indicative of the rapid growth of the population and of the commercial and industrial interests of Saint Louis. This information

was furnished by Mr. George H. Morgan, secretary of the Merchants' Exchange of that city.

In the following table is presented statistical information indicative of the growth of the commerce of Saint Louis from 1865 to 1878:

Statement showing the increase in the commerce, population, and value of property of Saint Louis from 1865 to 1878.

	1865.	1878.	Increase.	Per cent. of increase.
Arrivals of boats .....number..	2,767	2,322	445	.....
Arrivals of barges .....do.....	1,141	1,291	150	13.1
Receipts of wheat and flour .....bushels..	17,657,252	36,107,334	18,450,082	104.49
Shipments of wheat and flour .....do.....	13,427,052	29,432,435	16,005,383	119.2
Manufactures of flour .....barrels..	743,281	1,916,290	1,173,009	157.62
Receipts of cotton .....bales.....	*19,838	248,856	229,018	1,154.44
Receipts of pork .....barrels.....	66,822	52,200	14,622	.....
Receipts of hams and meat .....pounds..	34,781,570	58,611,064	23,829,494	68.51
Receipts of lard .....do.....	6,391,030	7,019,741	628,711	9.84
Receipts of cattle .....number.....	94,307	406,235	311,928	330.76
Receipts of sheep .....do.....	52,133	168,095	115,962	222.43
Receipts of hogs .....do.....	99,663	1,451,634	1,351,971	1,357.55
Population.....	†204,327	503,685	299,358	146.51
Value of real and personal property	\$87,625,534	\$172,829,980	85,204,446	97.24

* 1867.

† 1866.

‡ Decrease.

The total tonnage of freights received at, and shipped from Saint Louis, each year from 1871 to 1878, inclusive, is indicated in the following table:

Calendar year.	Tons received and shipped.	Calendar year.	Tons received and shipped.
1871	4,913,102	1875	5,836,840
1872	5,712,229	1876	6,380,150
1873	5,984,905	1877	6,359,398
1874	5,835,859	1878	6,995,241

This statement exhibits an almost constant yearly increase in the commerce of Saint Louis, even during the long period of commercial depression which prevailed throughout the country from 1873 to 1878.

Twenty-five years ago the commerce of Saint Louis was almost exclusively confined to the Mississippi River and its navigable tributaries. No other commercial city competed for the trade of that vast and now populous section of the country bordering on the Missouri and on the Upper Mississippi Rivers. At that time, railroads were hardly regarded as highways of commerce. No rail-line had been completed from the Atlantic seaboard to the Mississippi River, and less than 270 miles of road had been constructed west of that river. At the present time, however, the principal commerce of Saint Louis is over railroads. There are now at and north of Saint Louis no less than thirty-two lines of

railway extending from the Mississippi River towards the East, and that river is crossed by thirteen railroad bridges at and between Saint Louis and Saint Paul, Minn. There are now nearly 25,000 miles of railroad in operation west of the Mississippi, and Saint Louis enjoys the advantage of direct, expeditious, and regular rail communication, not only with the States formerly tributary to her trade, but also with States and Territories which were only a few years ago uninhabited and beyond the reach of commercial enterprise. The construction of railway lines in the States and Territories west of the Mississippi River has not only closely followed, but in some cases has preceded the development of the agricultural and the mineral resources of those States and Territories. The extension of these lines affords to-day one of the most cheering signs of national progress.

The change which has taken place in the commercial situation of Saint Louis, with respect to the means of transportation, is indicated by the fact that, during the year 1878, the total tonnage moved to and from that city by river and by rail respectively was as follows :

	Tons.
By river.....	1,329,375
By rail	5,665,866

The tonnage moved by rail was more than four times the tonnage moved by river.

A comparison based upon the value of commodities transported would show that a much larger percentage of the total commerce of Saint Louis is, at the present time, moved by rail than by river, the more valuable commodities being now mainly carried by rail, while the boats are chiefly confined to the carriage of the coarser and less valuable freights. These facts prove that the commerce of Saint Louis has to a great extent accommodated itself to the exigencies of railroad transportation.

The river tonnage of Saint Louis fell from 1,654,899 tons in 1871, to 1,329,375 tons in 1878, a decrease of 19.7 per cent., but the tonnage by rail rose from 3,258,203 tons in 1871, to 5,665,866 tons in 1878, an increase of 73.9 per cent.

The limits of the trade of Saint Louis can not be precisely defined, nor can the limits of the trade of any other great commercial city, as each city is either directly or indirectly the competitor of every other commercial city. Saint Louis has direct trade with San Francisco, with Saint Paul, Minn., with Chicago, with New Orleans, with the principal Atlantic seaports, and with some of the principal ports of Europe. This is also true of other great commercial cities, both at the West and on the seaboard. But in the sense of being the principal market for the sale of general merchandise, and for the purchase of surplus agricultural products of the surrounding country, the territorial extent of the commerce of Saint Louis may be described as follows :

The commerce of Saint Louis west of the Mississippi River and north of the State of Missouri is quite small, the city of Chicago having secured

the principal control of that trade by means of the system of east and west roads centering in that city.

Saint Louis competes sharply with Chicago for the trade of Northern Missouri, Kansas, Southern Nebraska, Colorado, the Territories tributary to the traffic of the Union and Central Pacific Railroad, and for the trans-continental trade with the States of the Pacific coast, and mainly controls so much of the trade towards the southwest as is embraced in the southern and central portion of Missouri, the State of Arkansas, and the northwestern section of Louisiana. For the trade of Kansas, the northern part of Texas, and the Indian Territory, Saint Louis meets an active competition in the commercial enterprises of Chicago.

The advent of railroads as highways of commerce has led to many changes, not only in the limits of the commerce of cities, but also in their relation to each other. This fact is strikingly illustrated with respect to the commerce of Saint Louis and of New Orleans. Twenty years ago almost all the commercial interests of these two cities were mutual and reciprocal, but to-day, with respect to the large and rapidly growing southwestern commerce, Saint Louis is a formidable rival of New Orleans. This new condition of affairs has resulted mainly from the construction of the Saint Louis, Iron Mountain and Southern Railroad, and the Missouri, Kansas and Texas Railroad. (See map No. 1 at the end of this report.) These lines have not only invaded Arkansas, Western and Northern Louisiana, and Texas, a section formerly embraced within the trade limits of New Orleans, but they have been the instrumentalities through which a very large commercial development has taken place within this highly productive and inviting section by facilitating immigration. Not only are the surplus products of a large part of the State of Arkansas, as well as of parts of Louisiana and Texas, shipped to Saint Louis and other northern cities for a market, but, in return, general merchandise is shipped to those States.

A large portion of the State of Texas is now in closer connection with Saint Louis, by means of postal and transportation facilities, than with New Orleans. The latter city will, however, probably become a more formidable competitor for the trade of Texas, upon the completion of the direct rail lines to Houston, at which point connection will be made with the railroad system of that State. It is also believed that, within a few years, direct rail connection will be completed between New Orleans and the present eastern terminus of the Texas Pacific Railroad at Marshall, Texas. These lines are delineated on Map No. 1.

The trade of Saint Louis towards the southeast, with the States situated south of the Ohio and east of the Mississippi River, has exhibited no material increase for several years. For the trade of this section, Saint Louis meets a sharp competition in the commercial enterprises of New Orleans, Louisville and Cincinnati. The Illinois Central Railroad, with its southern connection extending from Cairo, Ill., to New Orleans, and its lateral connecting lines, also enables the city of Chicago to exert

a direct competitive influence over this southern trade east of the Mississippi River.

The trade limits of Saint Louis towards the east and north of the Ohio River, not including the through traffic with the States of the Atlantic seaboard and with foreign countries, embrace a considerable portion of the State of Illinois and extend into Indiana and Ohio. This is a commerce almost entirely by rail, only a small percentage of it being carried on by means of boats plying on the Mississippi and Illinois Rivers. All this trade, with the exception of that in the immediate vicinity of Saint Louis, is highly competitive as between Chicago, Toledo, and Saint Louis. This applies both to the purchase of agricultural products, and to the sale of supplies and general merchandise. The state of the markets at these rival cities determines the course of trade of this section at all times. The receipts of flour and grain at Saint Louis from the east and from all other quarters, during the year 1878, is shown as follows:

From—	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
The east.....	209, 414	1, 306, 472	1, 209, 536	474, 103	52, 594	389, 607
All other quarters	1, 035, 922	13, 018, 959	7, 800, 187	3, 408, 173	793, 338	1, 127, 685
Total	1, 305, 336	14, 325, 431	9, 009, 723	3, 882, 276	845, 932	1, 517, 292
Per cent. from the east.....	20. 64	9. 12	13. 42	12. 21	6. 22	5. 98

The receipts of flour and grain at Saint Louis by the various lines of transport are shown in the tables on page 229 of the Appendix. Large quantities of hog products and live animals are also received at Saint Louis from the east. This is shown in the tables on page 234 of the Appendix. It will be observed from these tables that the shipments of grain, flour, hog products, and live animals toward the east, greatly exceed the receipts of such products from the east. Movements of this kind in the direction of a source of supply appear at first sight to be in defiance of the influence of distance as an element of the cost of transportation. They serve, however, to illustrate the economy of shipping articles of general consumption to the great commercial centers, thence to be distributed according to the demands of trade. The massing of agricultural products at great commercial centers and their distribution thence, is the normal mode of conducting trade; thus, capital employed in commerce becomes the ally of agriculture, and at the same time the economies of storage and of transportation in large quantities are subserved. These economies oftentimes outweigh the cost of transporting commodities even 200 miles by rail.

The commerce of Saint Louis with the States and Territories already referred to has, as its distinguishing characteristics, the purchase of the surplus products of those States and Territories, and the sale of merchandise for consumption within such Territorial limits. But the commerce

of Saint Louis with the Atlantic seaboard States and with foreign countries, presents itself under an entirely different aspect. This trade is highly competitive both as between rival cities and as between rival trunk railroads.

Direct trade between Saint Louis and the Atlantic seaboard has been mainly the growth of the last fifteen years. The direct trade between Saint Louis and foreign countries consists mainly in the exportation to Europe of breadstuffs and provisions, and the importation of manufactured articles from Europe. This subject is treated of more fully in another connection.

Having thus presented the general features of the commerce of Saint Louis, attention is invited to the statistical development of the commerce of that city, the statements being based mainly upon data furnished by Mr. George H. Morgan, secretary of the Merchants' Exchange of that city, in reply to inquiries submitted to him by this bureau.

In order to exhibit the relative magnitude of the commerce of Saint Louis towards the north, towards the south, towards the east, and towards the west, the railroads centering at that city have been classified as follows:

North roads.

The Chicago, Burlington and Quincy Railroad, Saint Louis division
The Saint Louis, Kansas City and Northern Railroad, northern division.

South roads.

The Saint Louis, Iron Mountain and Southern Railroad.
The Missouri, Kansas and Texas Railroad.
The Belleville and Southern Illinois Railroad.
The Saint Louis and Southeastern Railroad.
The Cairo and Saint Louis Railroad.



East roads.

The Ohio and Mississippi Railroad.
The Chicago, Alton and Saint Louis Railroad.
The Indianapolis and Saint Louis Railroad.
The Saint Louis, Vandalia, Terra Haute and Indianapolis Railroad.
The Wabash Railway.
The Illinois and Saint Louis Railroad.

West Roads.

The Missouri Pacific Railroad.
The Saint Louis and San Francisco Railroad.
The Saint Louis, Kansas City and Northern Railroad.

The commerce of Saint Louis towards the north is exhibited as follows:

Tons of freight received at Saint Louis from the north, and of freight shipped from that city to the north, by river and by rail, from 1871 to 1878, inclusive.

Calendar year.	Received.		Shipped.		Total receipts and shipments.		Total.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871.....	236,687	60,793	78,967	14,875	315,854	75,668	291,522
1872.....	242,584	120,422	55,235	23,965	297,819	144,387	442,206
1873.....	281,175	72,031	61,966	18,840	343,141	90,871	434,012
1874.....	231,060	137,016	95,800	20,467	326,860	157,483	484,343
1875.....	198,100	88,218	96,225	26,526	294,325	114,744	409,069
1876.....	224,860	100,087	93,360	35,269	318,220	135,856	453,576
1877.....	186,715	96,443	68,565	46,262	285,280	142,705	347,985
1878.....	174,065	208,563	67,320	59,281	241,385	267,844	509,229

It appears that the tonnage to and from the north by river fell from 315,854 tons in 1871, to 241,385 tons in 1878, and that the tonnage by rail increased from 75,668 in 1871, to 267,844 tons in 1878. The river traffic constituted 47 per cent. of the total northern traffic during the year 1878. The total receipts from, and total shipments to the north, are shown as follows:

Calendar year.	Received.	Shipped.
	<i>Tons.</i>	<i>Tons.</i>
1871.....	297,680	93,842
1872.....	363,006	79,200
1873.....	353,206	80,806
1874.....	368,076	116,287
1875.....	286,818	122,751
1876.....	294,947	123,629
1877.....	233,158	114,827
1878.....	382,628	126,601

The total receipts from the north by river and rail increased from 297,680 tons in 1871, to 382,628 tons in 1878, an increase of 28.54 per cent.; and the total shipments to the north increased from 93,842 tons in 1871, to 126,601 tons in 1878, an increase of 34.91 per cent.

The commerce of Saint Louis towards the south is exhibited as follows:

Tons of freight received at Saint Louis from the south, and of freight shipped from that city to the south, by river and by rail, from 1871 to 1878, inclusive.

Calendar year.	Received.		Shipped.		Total receipts and shipments.		Total.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	327, 262	782, 539	523, 505	172, 026	850, 767	954, 565	1, 805, 332
1872	308, 480	1, 083, 600	578, 508	257, 498	887, 076	1, 341, 093	2, 228, 169
1873	232, 460	1, 107, 228	562, 125	275, 998	794, 585	1, 383, 226	2, 177, 811
1874	176, 120	1, 020, 414	476, 735	291, 084	652, 855	1, 311, 498	1, 964, 353
1875	134, 465	1, 237, 205	370, 275	368, 357	504, 740	1, 605, 562	2, 110, 302
1876	159, 485	1, 151, 049	383, 485	313, 092	542, 970	1, 464, 141	2, 007, 111
1877	161, 870	1, 177, 779	427, 400	371, 402	589, 270	1, 549, 181	2, 138, 451
1878	187, 910	1, 102, 696	434, 490	397, 528	622, 400	1, 500, 224	2, 122, 624

It appears that the tonnage to and from the south by river fell from 850,767 tons in 1871, to 622,400 tons in 1878, and that the tonnage by rail increased from 945,565 tons in 1871, to 1,500,224 tons in 1878. The river traffic constituted 29 per cent. of the total southern traffic during the year 1878.

The total receipts from, and total shipments to the South, are shown as follows :

Calendar year.	Received.	Shipped.
	<i>Tons.</i>	<i>Tons.</i>
1871	1, 109, 801	695, 531
1872	1, 392, 080	836, 069
1873	1, 339, 688	838, 123
1874	1, 196, 534	767, 819
1875	1, 371, 670	738, 632
1876	1, 310, 534	696, 577
1877	1, 339, 649	798, 802
1878	1, 290, 606	832, 018

The total receipts from the south by river and rail increased from 1,109,801 tons in 1871, to 1,290,606 tons in 1878, an increase of 16.29 per cent., and the total shipments to the south increased from 695,531 tons in 1871, to 832,018 tons in 1878, an increase of 19.62 per cent.

The commerce of Saint Louis towards the east is exhibited as follows:

Tons of freight received at Saint Louis from the east, and of freight shipped from that city to the east, by river and by rail, from 1871 to 1878, inclusive.

Calendar year.	Received.		Shipped.		Total receipts and shipments.		Total.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	
1871	247, 673	971, 572	123, 588	422, 048	371, 261	1, 393, 620	1, 764, 881
1872	285, 960	1, 055, 585	143, 915	544, 349	429, 875	1, 599, 934	2, 029, 809
1873	248, 790	1, 319, 929	131, 355	567, 093	380, 145	1, 887, 622	2, 267, 767
1874	280, 755	1, 259, 277	114, 400	631, 637	395, 155	1, 890, 914	2, 286, 069
1875	300, 800	1, 242, 066	147, 495	603, 032	448, 295	1, 845, 098	2, 293, 393
1876	254, 065	1, 255, 962	104, 020	922, 271	358, 085	2, 178, 233	2, 536, 318
1877	296, 255	1, 338, 605	78, 520	848, 928	374, 775	2, 187, 533	2, 562, 308
1878	296, 685	1, 473, 863	90, 400	1, 029, 006	387, 085	2, 502, 869	2, 889, 954

The tonnage by river increased from 371,261 in 1871, to 387,085 in 1878, while the tonnage by rail increased from 1,393,620 in 1871, to 2,502,869 in 1878. The river traffic constituted 13 per cent. of the total eastward traffic during the year 1878.

The receipts (including coal from the States of Illinois and Indiana, of which the receipts were about 350,000 tons in 1871 and about 1,000,000 tons in 1878) increased from 1,219,245 tons in 1871, to 1,770,548 tons in 1878, an increase of 45.22 per cent., and the shipments to the east, chiefly breadstuffs and provisions, increased from 545,636 tons in 1871, to 1,119,406 tons in 1878, an increase of 105.16 per cent.

The total receipts from, and shipments to the east, are shown as follows:

Calendar year.	Received.	Shipped.
	Tons.	Tons.
1871.....	1, 219, 245	545, 636
1872.....	1, 341, 545	688, 264
1873.....	1, 568, 719	699, 048
1874.....	1, 540, 032	746, 037
1875.....	1, 542, 866	750, 527
1876.....	1, 510, 027	1, 026, 291
1877.....	1, 634, 860	927, 448
1878.....	1, 770, 548	1, 119, 406

The commerce of Saint Louis towards the west is exhibited as follows:

Tons of freight received at Saint Louis from the west, and of freight shipped from that city to the west, by river and by rail, from 1871 to 1878, inclusive.

Calendar year.	Received.		Shipped.		Total receipts and shipments.		Total.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	72, 579	483, 417	44, 438	350, 933	117, 017	834, 350	951, 367
1872	26, 895	578, 757	27, 536	378, 857	54, 431	957, 614	1, 012, 045
1873	38, 630	745, 990	27, 810	292, 885	66, 440	1, 038, 875	1, 105, 315
1874	44, 830	748, 386	20, 390	287, 488	65, 220	1, 035, 874	1, 101, 094
1875	30, 160	668, 281	25, 100	303, 535	55, 260	968, 816	1, 024, 076
1876	50, 345	924, 122	19, 390	389, 318	69, 705	1, 313, 440	1, 383, 145
1877	49, 645	851, 561	23, 185	386, 258	72, 830	1, 237, 819	1, 310, 649
1878	56, 040	1, 000, 185	22, 465	394, 744	78, 505	1, 394, 929	1, 473, 434

It appears that the tonnage to and from the west by the river fell from 117,017 tons in 1871, to 78,505 tons in 1878, and that the tonnage by rail increased from 834,350 tons in 1871, to 1,394,929 tons in 1878. The river traffic constituted but 5 per cent. of the total western traffic during the year 1878.

The total receipts, from and shipments to the west, are shown as follows :

Calendar year.	Received.	Shipped.
	<i>Tons.</i>	<i>Tons.</i>
1871	555, 996	395, 371
1872	605, 652	406, 393
1873	784, 620	320, 695
1874	793, 216	307, 878
1875	695, 441	328, 685
1876	974, 467	408, 678
1877	901, 206	409, 443
1878	1, 056, 225	417, 209

The total receipts from the west rose from 555,996 tons in 1871, to 1,056,225 tons in 1878, an increase of 89.97 per cent.; and the total shipments to the west rose from 395,371 tons in 1871, to 417,209 tons in 1878, an increase of 5.52 per cent.

The growth of the commerce of Saint Louis in each direction is indicated by the following table :

Total tons of freight received, from and shipped in each direction, from 1871 to 1878, inclusive.

Calendar year.	North.	East.	South.	West.	Total.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	391, 522	1, 764, 881	1, 805, 332	951, 367	4, 913, 102
1872	442, 306	2, 029, 809	2, 228, 169	1, 012, 045	5, 712, 239
1873	434, 012	2, 267, 767	2, 177, 811	1, 105, 315	5, 984, 905
1874	484, 343	2, 286, 069	1, 964, 353	1, 101, 094	5, 835, 869
1875	406, 069	2, 293, 393	2, 110, 302	1, 024, 076	5, 833, 840
1876	458, 576	2, 536, 318	2, 007, 111	1, 383, 145	6, 380, 150
1877	347, 985	2, 562, 308	2, 138, 451	1, 310, 649	6, 359, 393
1878	509, 229	2, 889, 954	2, 122, 624	1, 473, 434	6, 995, 241

The commerce of Saint Louis towards the north increased from 391,522 tons in 1871, to 509,229 tons in 1878.

The commerce of Saint Louis towards the east exhibited a large and rapid increase, having risen from 1,764,881 tons in 1871, to 2,889,954 tons in 1878.

The commerce towards the south remained nearly stationary, having amounted to 1,805,332 tons in 1871, to 2,177,811 tons in 1873, and to 2,122,624 in 1878.

The commerce towards the west also indicates a large increase, it having risen from 951,367 tons in 1871, to 1,473,434 tons in 1878.

The proportion of tonnage in each direction, during the year 1878, was as follows:

Direction.	Tons.	Per cent.
North	509, 229	7. 28
West	1, 473, 434	21. 06
South	2, 122, 624	30. 45
East	2, 889, 954	41. 31

If the Saint Louis, Iron Mountain and Southern Railroad, and the Missouri, Kansas and Texas Railroad be regarded as western, instead of as southern lines, (since the general direction of each is southwesterly), the division of tonnage would be as follows:

Direction.	Tons.	Per cent.
North	509, 229	7. 28
South	1, 423, 120	20. 35
West	2, 172, 938	31. 06
East	2, 889, 954	41. 31

The total commerce of Saint Louis by river and by rail is exhibited as follows:

Total tons of freight received at, and shipped from Saint Louis by river and by rail, from 1871 to 1878, inclusive.

Calendar year.	By river.	By rail.	Total.	Per cent.	
				By river.	By rail.
1871	1, 654, 899	3, 258, 203	4, 913, 102	33. 68	66. 32
1872	1, 689, 201	4, 043, 028	5, 712, 229	29. 22	70. 78
1873	1, 584, 311	4, 400, 594	5, 984, 905	26. 47	73. 53
1874	1, 440, 090	4, 395, 709	5, 835, 859	24. 68	75. 32
1875	1, 302, 620	4, 534, 220	5, 836, 840	22. 32	77. 68
1876	1, 288, 080	5, 091, 170	6, 380, 150	20. 20	79. 80
1877	1, 242, 155	5, 117, 238	6, 359, 393	19. 53	80. 47
1878	1, 320, 375	5, 665, 806	6, 986, 241	19. 00	81. 00

It appears that the total tonnage by river fell from 1,654,899 tons in 1871, to 1,329,375 tons in 1878, but that the tonnage by rail increased from 3,258,203 tons in 1871, to 5,665,866 tons in 1878. The total tonnage of the city increased from 4,913,102 tons in 1871 to 6,995,241 tons in 1878.

The tonnage of Saint Louis by river fell from 33.68 per cent. of the total in 1871, to 19 per cent. of the total in 1878, and the tonnage by rail increased from 66.32 per cent. of the total in 1871, to 81 per cent. of the total in 1878.

The eastward movement of tonnage from Saint Louis is now the largest of all. The fact is thus developed that, over the bridge crossing the Mississippi River at that city, there now moves a much larger commerce than that on the river which flows beneath it.

In direct trade with foreign countries, the value of the eastward shipments from Saint Louis by rail via Atlantic seaports, is nearly three times as great as the value of the southward shipments by Mississippi River via New Orleans.

Statistics showing the relative movement of freights at Saint Louis towards the south and towards the east are of great value, as illustrations of the course of the internal commerce of the country and of the conditions governing its movements. These two movements of the trade of Saint Louis are presented somewhat in detail in the following series of statements showing the relative shipments of cotton, flour, grain, provisions, and live-stock from Saint Louis towards the south and towards the east during the year 1878. These commodities constitute the principal articles of commerce shipped from that city in each direction.

COTTON.

Shipped south:		
		Bales
By rail		3,794
By river		6,400
Total		10,194
Shipped east:		
By rail		223,329
By river		2,810
Total		226,139

It appears that 4.31 per cent. of the shipments of cotton was towards the south, and 95.69 per cent. towards the east.

WHEAT.

Shipped south:		
		Bushels
By rail		228,451
By river		1,897,999
Total		2,126,450
Shipped east:		
By rail		4,610,265
By river		14,699
Total		4,624,964

Of the shipments of wheat, 31.5 per cent. was towards the south, and 68.5 per cent. towards the east.

CORN.	
Shipped south:	
	Bushels
By rail.....	363,305
By river.....	3,383,541
Total.....	3,746,846
Shipped east:	
By rail.....	2,604,143
By river.....	23,747
Total.....	2,627,890

Of the shipments of corn, 58.78 per cent. was towards the south, and 41.22 per cent. towards the east.

FLOUR.	
Shipped south:	
	Barrels
By rail.....	451,913
By river.....	565,744
Total.....	1,017,657
Shipped east:	
By rail.....	1,578,950
By river.....	22,214
Total.....	1,601,164

Of the shipments of flour, 38.86 per cent. was towards the south, and 61.14 per cent. towards the east.

GRAIN.	
(Including wheat, corn, rye, oats, barley, and flour reduced to bushels.)	
Shipped south:	
	Bushels.
By rail.....	3,313,786
By river.....	10,059,142
Total.....	13,372,928
Shipped east:	
By rail.....	15,456,225
By river.....	157,955
Total.....	15,614,180

Of the shipments of grain, 46.13 per cent. was towards the south, and 53.87 per cent. towards the east.

HOG PRODUCT.	
Shipped south:	
	Pounds.
By rail.....	82,444,204
By river.....	54,548,402
Total.....	136,992,606

Shipped east:		Pounds.
By rail.....	46,122,720	
By river	793,348	
Total	46,916,066	

Of the shipments of hog products, 74.49 per cent. was towards the south, and 25.51 per cent. towards the east.

Shipped south:		CATTLE.	Number.
By rail.....	1,299		
By river	1,652		
Total	2,951		

Shipped east:			
By rail.....	255,376		
By river			
Total	255,376		

Of the shipments of cattle, 1.15 per cent. was towards the south, and 98.85 per cent. towards the east.

Shipped south:		SHEEP.	Number.
By rail.....	3,486		
By river	1,022		
Total	4,508		

Shipped east:			
By rail.....	65,492		
By river			
Total	65,492		

Of the shipments of sheep, 6.44 per cent. was towards the south, and 93.56 per cent. towards the east.

Shipped south:		HOGS.	Number.
By rail.....	2,125		
By river	997		
Total	3,122		

Shipped east:			
By rail.....	524,448		
By river			
Total	524,448		

Of the shipments of hogs, 0.59 per cent. was towards the south, and 99.41 per cent. towards the east.

It is stated by the secretary of the Saint Louis Merchants' Exchange that the prices of wheat and corn at Saint Louis are not governed to any appreciable extent by the prices which prevail at New Orleans, but rather by those which prevail at Chicago, Toledo, New York, and other

eastern markets. Twenty years ago the prices of these commodities, and also the prices of provisions at Saint Louis, were mainly governed by the New Orleans markets. This fact also serves to illustrate the remarkable changes which have taken place in the circumstances surrounding and governing the commerce of Saint Louis.

The passenger traffic by river, once a large source of profit, has become an unimportant item. Passengers now generally prefer the more rapid mode of transport by rail, the travel by river being confined mainly to the smaller towns which have no direct rail communication.

The character of the freight traffic by river has also greatly changed during the last ten years. The trade of the Upper Mississippi River has been principally diverted to the east-and-west railroads crossing that river. The freight traffic of the Missouri River has been almost entirely diverted to the railroads along either side of it, and to the other routes leading to Saint Louis and Chicago.

The nature of the competition existing between the Mississippi River below Saint Louis, and the rail-lines extending from the western and northwestern States into the States south of the Ohio River and south of the States of Missouri and Kansas, may be summarily described as follows: The lower classes of freight moved between towns situated on the Mississippi River are chiefly transported by river, from the fact that the cost of transportation by river is much less than by rail. The railroads connecting the principal river towns have, however, been able to secure the principal part of the carriage of the higher classes of freights between those towns. The managers of the railroads make little effort to compete with steamboats for the carriage of the lower classes of freight between river towns, knowing that however low their rates may be made, the boats will underbid them. The result is that the principal part of this class of traffic, as well as a part of the traffic of interior points directly connected with such river towns by local roads, is received at and shipped from such towns by river.

The rates for the transportation of fourth-class freights (the lowest class) from Saint Louis southward which prevailed in May, 1879, serve to illustrate the relative advantages, in point of cost, afforded by the river and by the railroads.

Rates on fourth-class freights from Saint Louis.

	By river.	By rail.
To Memphis	12½ cents per 100 pounds	20 cents per 100 pounds.
To Vicksburg	17½ cents per 100 pounds	39 cents per 100 pounds.
To New Orleans	12½ cents per 100 pounds	32 cents per 100 pounds.

The railroads have, however, been able to secure almost the entire traffic, both of the higher and lower classes, to and from all the important interior points in the States south of Missouri and south of the Ohio River.

Notwithstanding the facts above stated as to the diversion of freights from the Mississippi River to the railroads, that river affords inestimable advantages to the commerce of Saint Louis and of a large portion of the country, by operating as a regulator of rail rates not only between the Western and Northwestern States and the Gulf ports, but also between the Western and Northwestern States and the Atlantic seaports. The value of the Mississippi River as an avenue of commerce cannot, therefore, be determined solely from a comparison instituted between the quantity and value of the commodities moved upon it, and the quantity and value of commodities moved by rail, since the indirect advantages which it exerts as a regulator of rail rates are the more important.

The movement of grain and provisions from the West to the Atlantic seaboard, and to the South Atlantic and Gulf States, constitutes a large and controlling interest in our internal commerce. Upon whatever course these western commodities are moved, there naturally arises a large reciprocal commerce in general merchandise and supplies of various kinds. The bare possibility of the diversion of the movement of grain and provisions from its present course to the Atlantic seaports by rail, to New Orleans by river, in case of any considerable increase of rail rates to the East, exerts, however, a potential influence over rail rates with respect to such commodities exported to Europe. All railroad managers defer to this influence in the adjustments of their freight charges.

Besides the restraining influence of the cheap river rates, the Mississippi River also confers a direct benefit upon the commercial interests of the States situated south of the State of Missouri, and south of the Ohio River, by promoting competition between railroads for the traffic of all these States with the Northwestern States. The railroads extending from Cincinnati, Louisville, Chicago, and Saint Louis into the Southern States mentioned, meet the competition of the east-and-west railroads which reach the Mississippi River at Columbus, Ky.; at Memphis, Tenn.; at Vicksburg, Miss.; and at New Orleans, La., as all these roads connect with steamboats plying between these termini on that river and Saint Louis, the chief commercial center for the shipment of breadstuffs and provisions to the Southern States. By means of such connection between the boats and these east-and-west roads, through-rates are made from Saint Louis to all the principal centers of trade of Tennessee, Mississippi, Alabama and Georgia.

THE TRADE OF SAINT LOUIS WITH TEXAS.

The trade between Saint Louis and Texas has been an outgrowth of the construction of the Saint Louis, Iron Mountain and Southern Railroad, and of the Missouri, Kansas and Texas Railroad, the former having been completed to Texarkana March 20, 1874, and the latter to Dallas, Tex., December 1, 1877.

It appears probable that there will be, for several years, a rapid development of the trade of Saint Louis with Texas, in view of the immense area of that State, its fertile soil and salubrious climate, the constant flow of immigration into it, and the enterprise displayed in the extension of existing roads and the construction of new lines. Already this trade has assumed large proportions. Unfortunately there is a lack of statistical data showing its quantity and value.

The principal articles received at Saint Louis from Texas are cotton, live-stock and hides. The shipments to Texas consist of the various classes of supplies, breadstuffs, provisions, agricultural implements and general merchandise.

THE COTTON TRADE OF SAINT LOUIS.

The growth of this trade is indicated by the following table:

Receipts of cotton at Saint Louis by river and by rail, during the past fourteen years.

Cotton year ending August 31—	By river.	By rail.	Total.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1866	53,506	1,921	55,427
1867	18,712	1,066	19,779
1868	38,804	220	39,024
1869	16,614	82	16,696
1870	17,084	1,484	18,518
1871	15,582	4,688	20,270
1872	30,018	6,403	36,421
1873	26,577	33,132	59,709
1874	27,538	76,208	103,741
1875	11,750	122,219	133,969
1876	19,620	224,978	244,598
1877	6,650	211,084	217,734
1878	9,998	238,858	248,856
1879	15,012	320,787	335,799

The receipts of cotton at Saint Louis by river fell from 53,506 bales during the year 1866, to 15,012 bales during the year 1879, but the receipts by rail rose from 1,921 bales during the year 1866, to 320,787 bales during the year 1879. The total receipts increased from 55,427 bales during the year 1866, to 335,799 bales during the year 1879.

At the present time the cotton receipts of Saint Louis are principally by the Saint Louis, Iron Mountain and Southern Railroad, and the Missouri, Kansas and Texas Railroad, the former road having delivered 304,486 bales and the latter road 10,553 bales of the total receipts amounting to 335,799 bales during the year 1879.

Of the total receipts of cotton at Saint Louis during the year 1879, 149,776 bales, or 44.58 per cent., came from Texas and Western Louisiana. Of the total shipments of cotton from Saint Louis during the year 1879, 104,150 bales, or about 31 per cent. of the total receipts was exported directly to Europe; the remaining 221,616 bales shipped being taken prin-

ipally by spinners in the New England States. The total shipments amounted to 325,766 bales.

In the cotton trade of Texas, the all-rail line via Saint Louis to the Atlantic seaboard, competes sharply with the rail and ocean line via Galveston. The average rates during the year 1878 for the transportation of cotton from Dallas, Texas, to New York and Boston by the two routes were as follows:

	Dallas, Tex., to—	
	New York.	Boston.
	<i>Per bale.</i>	<i>Per bale.</i>
Via Saint Louis	6.02	6.27
Via Galveston	5.65	5.90

The addition of the marine insurance via Galveston makes the total cost of transportation via that city about equal to the cost via Saint Louis by the all-rail lines.

In a communication dated December 1, 1879, Mr. Morgan, secretary of the Saint Louis Merchants' Exchange, says:

The business for the next cotton year promises to reach 500,000 bales, judging from the increase for the first three months of the year. The receipts compare as follows:

	Bales.
Receipts for September, October, and November, 1879.....	257,690
Receipts for September, October, and November, 1878.....	159,273

RAILROAD EXTENSIONS IN THE INTEREST OF SAINT LOUIS.

The following railroads in the interest of the trade of Saint Louis have recently been completed or are now in course of construction:

First. The recently completed line of the Chicago and Alton Railroad from Mexico to Kansas City, Mo., gives to Saint Louis three independent railway lines to Kansas City, Leavenworth, Atchison, and Saint Joseph. Although the distance from Kansas City to Saint Louis by this line is about 40 miles longer than by the Missouri Pacific or by the Saint Louis, Kansas City and Northern Railroad, it is an active competitor for the traffic of the towns on the Missouri River above mentioned. For several months an almost unprecedented war of rates was carried on between the three roads. An agreement as to rates and the division of the traffic was, however, arrived at in September, 1879.

Second. The Missouri Pacific Railroad Company is now constructing a branch line running from Holden, a point 50 miles from Kansas City, to Paalakas, Mo., and thence southwesterly to Winfield, in the southern part of Kansas. It is said to be the intention of the Missouri Pacific Railroad Company to extend this branch line along the southern boundary of Kansas to Colorado and Arizona.

Third. The Saint Louis and San Francisco Railroad Company is now constructing a branch westward from Pierce City (a point in the south-

western part of Missouri), through Oswego to Wichita, Kansas. The effect of the extension of the two branch railroads will be to draw a very considerable amount of the trade of Southern Kansas directly to Saint Louis.

Fourth. About the 1st of February, 1879, the Saint Louis, Kansas City and Northern Railroad Company commenced the extension of its Brunswick and Chillicothe Branch from Pattensburgh, Mo., in a direct line to Omaha. It is expected that this line will be completed about the close of the present calendar year. The managers of the road and the merchants of Saint Louis think that the completion of this line will enable that city to compete successfully with Chicago for both the passenger and freight traffic of Nebraska, and of the States and Territories tributary to the traffic of the Union and Central Pacific Railroads.

Fifth. In June last the gauge of the Saint Louis, Iron Mountain and Southern Railroad was changed in a few hours from 5 feet to 4 feet 8½ inches, which is the standard gauge of all the railroads connecting the Mississippi River with the Atlantic seaports, and of the Texas Pacific Railroad. This change of gauge will save a large amount of expense connected with the transshipment of freight at both termini of the line of the Saint Louis, Iron Mountain and Southern Railroad, and it is thought that the commercial interests of Saint Louis will thereby be materially advanced.

Sixth. An important feeder of the Saint Louis, Iron Mountain and Southern Railroad is now in course of construction, namely, a narrow-gauge railroad from Texarkana to Corsicana, Tex., on the line of the Texas Central Railroad. It is expected that this line will be extended westward to the Waco on the Brazos River. It will pass through a highly productive cotton region, and it is expected that it will add largely to the cotton trade of Saint Louis and the general trade of that city with Texas.

CONDITIONS GOVERNING COMMERCE BY RAIL BETWEEN SAINT LOUIS AND THE ATLANTIC SEABOARD.

From the time of the completion of the various trunk lines between Saint Louis and Atlantic seaports, the managers of these roads have actively competed for through-traffic, but the rates from time to time agreed upon were determined with little regard to rates prevailing between Chicago and the Atlantic seaports, or between other cities of the West and the Atlantic seaports. Railroad managers on long lines did not then fully realize the fact, afterwards forced upon them by the logic of events, that they must look beyond the termini and the stations upon their respective lines to find conditions governing the rates which they could impose upon their through-traffic. A careful study of such external circumstances, however, convinced them that the commercial prosperity of the city upon which their traffic interests mainly depended was, to a great extent, influenced by the rates prevailing on railroads tributary to rival

cities, and thus they were led to see that their own freight tariffs must be adjusted with reference to those prevailing on other roads.

It is in this manner that the competition of trade forces operates as a regulating and controlling influence over rates charged on railroads which compete with each other through rival markets.

When the merchants of Saint Louis invited the attention of the managers of the railroads extending from that city to the East to considerations of this character, it was not difficult to convince them that very small differences in the rates charged by their lines in excess of the rates charged by the Chicago roads, would have the effect of diverting a large amount of business from Saint Louis to Chicago, which, if secured by the former city, would bring much traffic to its tributary railroads. The managers of these lines were thus brought to realize the fact that through the markets of Chicago the railroads tributary to that city were, with respect to a very considerable part of their east-bound traffic, the constant and active competitors of the Saint Louis railroads.

The adjustment of through rates from Saint Louis to the Atlantic seaboard with reference to current rates from Chicago to the seaboard was formally effected in the spring of 1876. On March 2 of that year, the managers of the trunk lines resolved that the through rates and classification on traffic from Chicago to the seaboard should be accepted as the basis on which through rates from other western points should be made. It was agreed that the rates should be made the same per ton per mile from Saint Louis and other points to the seaboard via their respective shortest lines, as the rates from Chicago to New York via the shortest line between the latter points. Notice of this agreement was sent by the trunk lines to the managers at their western connections on March 10, 1876, and the latter met in convention in Chicago on April 13, ensuing, to consider the question. That convention agreed to adopt the list of distances from common or competitive western points to New York, Philadelphia, and Baltimore, agreed upon by the trunk lines, it being understood that these distances were based upon the shortest routes to the points named.

The percentage thus agreed upon made the rates from East Saint Louis to New York 116 per cent. of the current rates from Chicago. The regular tariffs have since been made on that basis, and whenever rates are maintained from all other western points, this difference has been acceptable to the merchants of Saint Louis. But no effective means were provided for the maintenance of rates; hence ruptures have frequently ensued, during which the prevailing rates have been made much lower than those which would have been established upon the basis of rates from rival cities to the east.

The apportionment of traffic was finally resorted to. This appears to be the usual expedient of the present day for avoiding the difficulties in the way of maintaining rates. Early in the year 1876, the five railroads leading east from Saint Louis—the Chicago and Alton, the Ohio and

Mississippi, the Indianapolis and Saint Louis, the Vandalia, and the Wabash, agreed to pool the traffic destined to Atlantic seaboard points. The general direction of affairs was intrusted to an executive committee of three managers, and the details were devolved upon a secretary. The arrangement did not work satisfactorily, and therefore it was abandoned after a few months' trial.

The next effort was general in its application. It was an endeavor on the part of the managers of the trunk lines to induce the formation of pools at the large cities of the West, and is thus described by Mr. J. W. Midgley, railroad commissioner, of Chicago, Ill.:

The roads leading east from Saint Louis were grouped in one pool, those from Chicago in another, and in like manner those from Cincinnati and from Louisville. These several groups were embraced under the general description of the east-bound freight compact and placed under the direction of Commissioner N. Guilford. His position was not an enviable one nor was it tenable very long, for the reason that he lacked the authority to enforce his orders. After a fretful existence of four or five months, the arrangement fell to the ground.

In November ensuing, another attempt was made to form a pool from Saint Louis. This effort also was undertaken in compliance with the wishes of the trunk lines. The five roads leading east from that city agreed to accept equal proportions of the traffic destined east of Dunkirk, Buffalo, Pittsburgh, Wheeling, and Parkersburg. A general agent was appointed on the understanding that bills of lading should be issued only from his office. At the same time or soon thereafter, similar compacts were formed at Peoria, Indianapolis, and Cincinnati, and it was understood that the roads from Chicago would also pool their traffic. The Chicago managers, however, were unable to agree upon their percentages of traffic. Several meetings were held but no agreement was reached, consequently the compacts at Saint Louis and the other cities named were abandoned. A war of rates ensued which in intensity surpassed all previous contests. During its prevalence, rates from East Saint Louis to New York were made as low as 10 cents per 100 pounds on grain and provisions, and it was affirmed that a quantity of flour was taken at 8 cents per barrel or 4 cents per 100 pounds.

The inability of the managers to agree on percentages, or as to arbitrators who should make the allotments, led the joint executive committee of the trunk lines to select a permanent board of arbitration. This accomplished, direction was given that rates from all western points be restored, and that efforts be made to agree upon pools. In the event of failure to agree, the points of disagreement were to be submitted to the board of arbitration and their award was to be accepted as final.

Meantime the merchants of Saint Louis have complained loudly of the discrimination made in the rates on business from the seaboard to Saint Louis. For several years the basis of rates from New York to East Saint Louis was 122 per cent. of those from New York to Chicago, whereas the basis of the rates from East Saint Louis to New York was 116 per cent. of the rates from Chicago to New York. The dealers of Saint Louis claimed that the basis of east-bound rates should also apply to west-bound. The agitation was continued until June, 1878, when a concession was made as to Missouri River business. The trunk lines then decided that the rates on all business destined to Missouri River points and beyond should be made from New York to East Saint Louis on the basis of 116 per cent. of the rates from New York to Chicago, but that business destined to Saint Louis, locally, should still be charged 122 per cent. of the Chicago rates.

Next year the agitation was renewed and pressed so vigorously that in June, 1879, the trunk lines compromised by agreeing to make the rates on all business carried to

or through Saint Louis 119 per cent. of the Chicago rates. This settlement has been quietly accepted.

The pooling arrangement never worked harmoniously, presumably from some defect in the organization through which it was carried on, and on the 1st of April, 1879, it was discontinued.

4. THE COMMERCIAL AND TRANSPORTATION INTERESTS OF THE CITY OF CHICAGO.

The magnitude of the commercial and transportation interests of the city of Chicago renders their presentation of great importance in connection with the object of describing the conditions governing the internal commerce of the country.

The commercial importance of Chicago is mainly due to its geographical position, and to the fact that it is the point of convergence of the principal railroads of the Western and Northwestern States, and of the trunk railroads connecting the Western and Northwestern States with the four principal cities of the Atlantic seaboard.

Any attempt to present the commercial and industrial importance of a city by means of a comparison instituted between it and other cities, while contributing to the general stock of useful information, may, perhaps, lead to misapprehension, from the fact that cities differ widely in their commercial and industrial characteristics. Such differences result from geographical situation, accessibility to one or more of the products of agriculture or of mining, the facilities of transportation afforded by natural and artificial highways, climatic influences, the tastes and habits of the people who sustain to its commercial interests the relationship of customers, and from numerous other circumstances. Interests which in one city are preponderating and controlling may in another city be comparatively unimportant and of small influence.

This diversity of conditions leads to wide differences in the nature of the commercial activities of different cities. Evidently, therefore, any special comparisons instituted for the purpose of showing the relative importance of two or more great centers of trade and industry, especially when instituted between cities whose interests are competitive at a thousand points, must be taken subject to these important qualifying conditions. In this view, comparative statistics are here presented, showing in certain particulars the relative importance of the cities of Chicago, Saint Louis, and Milwaukee, the three principal primary markets of the Northwest. These statistics have been collated and published by the local governments and the leading commercial bodies of those cities respectively.

The following table indicates the population, the receipts, and the shipments of wheat, flour, corn, cattle, sheep, hogs, hog products, manufactures of flour, malt liquors, and high wines, of the three cities above mentioned :

Comparison of receipts and shipments of principal products contributing to the trade of Chicago, Saint Louis, and Milwaukee during the year 1878.

	Chicago.	Saint Louis.	Milwaukee.
Population	490,000	503,683	100,775
Receipts of flour barrels..	8,030,562	1,305,336	2,288,303
Shipments of flour do....	2,779,640	2,670,740	2,630,022
Receipts of wheat bushels..	29,713,577	14,325,431	21,763,312
Shipments of wheat..... do....	24,211,739	6,900,802	17,254,453
Receipts of corn do....	63,651,518	9,009,723	984,356
Shipments of corn do....	59,944,200	6,382,712	460,104
Receipts of oats do....	18,839,297	3,882,276	2,037,437
Shipments of oats do....	16,464,513	1,792,801	1,554,338
Receipts of barley do....	5,754,059	1,517,292	3,409,710
Shipments of barley..... do....	3,520,983	244,799	2,220,647
Receipts of grain do....	134,086,593	36,107,334	39,234,906
Shipments of grain do....	118,675,269	29,432,485	34,088,546
Receipts of cattle..... number..	1,083,068	406,235	66,786
Shipments of cattle do....	699,108	261,723	49,080
Receipts of sheep do....	310,420	168,095	50,015
Shipments of sheep do....	74,433	33,490	33,490
Receipts of swine do....	6,339,654	1,451,634	606,063
Shipments of swine do....	1,206,906	528,627	116,273
Shipments of hog products..... pounds..	1,060,866,907	188,529,593	.....
Receipts of butter do....	48,379,282	8,627,056	6,764,245
Shipments of butter..... do....	44,507,599	1,626,349	5,826,589
Receipts of lumber feet..	1,180,586,150	189,238,333	132,900,000
Shipments of lumber..... do....	626,735,118	100,483,000	.....
Receipts of coal tons..	1,832,033	1,323,492	239,667
Shipments of coal do....	305,694	.....	.....
Manufactures of flour barrels..	308,284	1,916,290	555,049
Manufactures of malt liquors.....	.....	.....	426,340
Manufactures of high wines..... gallons..	10,262,155	.....	18,063

* Includes 1,079,750 bushels coke.

It is unnecessary to pursue the foregoing comparison further than to remark, that it is made with the special object of presenting the general course of the surplus agricultural products of the West with respect to the three principal primary markets. In order to arrive at an expression of the relative importance of the three cities above mentioned it would be necessary to ascertain the aggregate value of all the commercial and industrial activities of each.

The facts relative to the growth of the commercial and transportation interests of Chicago serve to throw light upon the growth and the conditions governing the commerce of the Western and Northwestern States. The controlling element of the commercial and industrial interests of Chicago consists in the fact that that city is the principal primary market for the purchase and sale of the agricultural products of the Western and Northwestern States and for the manufacture of certain of these products into the various forms in which they appear in commerce.

RECEIPTS OF FLOUR AND GRAIN AT CHICAGO FOR TWENTY-SEVEN YEARS.

The following table shows the aggregate annual receipts of flour and all kinds of grain in Chicago for each year since 1851:

Calendar year.	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.	Total receipts, (flour reduced to wheat.)
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1852	53,337	937,496	2,991,011	2,089,941	21,015	127,028	6,406,508
1853	48,297	1,687,465	2,869,339	1,875,770	86,162	192,387	6,928,459
1854	158,575	3,038,955	7,490,753	4,194,385	85,691	201,764	15,725,135
1855	240,662	7,535,097	8,532,377	2,947,188	68,166	201,695	20,367,702
1856	324,921	8,767,760	11,888,398	2,219,987	45,707	128,457	24,512,454
1857	393,934	10,554,761	7,409,000	1,707,245	87,711	127,689	21,659,109
1858	522,137	9,630,614	8,252,641	2,883,597	71,012	413,812	23,610,293
1859	726,321	8,060,766	5,401,870	1,757,696	231,514	652,696	19,372,986
1860	713,348	14,927,083	15,862,394	2,198,889	318,976	617,619	37,235,027
1861	1,479,284	17,385,002	26,369,989	2,067,018	490,989	457,589	53,427,365
1862	1,666,391	13,978,116	29,574,328	4,688,722	1,038,825	872,053	57,650,804
1863	1,424,206	11,408,161	26,611,633	11,086,131	865,508	1,280,342	57,680,722
1864	1,205,698	12,184,977	13,807,745	16,351,616	1,060,116	1,018,813	49,848,908
1865	1,134,100	9,266,410	25,952,201	11,659,080	1,194,834	1,774,139	54,950,114
1866	1,847,145	11,678,753	33,543,061	11,140,264	1,679,541	1,742,652	68,396,423
1867	1,720,001	13,695,244	22,772,715	12,355,006	1,291,821	2,360,984	60,215,774
1868	2,192,413	14,772,094	25,570,494	16,032,910	1,523,820	1,915,056	69,680,233
1869	2,218,822	16,876,760	23,475,800	10,611,940	955,201	1,513,110	63,417,510
1870	1,766,037	17,394,409	20,189,775	10,472,078	1,093,493	3,335,653	60,432,574
1871	1,412,177	14,439,656	41,853,138	14,789,414	2,011,788	4,069,410	83,518,202
1872	1,532,014	12,724,141	47,366,087	15,061,715	1,129,086	5,251,750	88,426,842
1873	2,487,376	26,266,562	38,157,232	17,888,724	1,189,464	4,240,239	96,935,413
1874	2,666,679	29,764,622	35,790,638	13,901,235	791,182	3,354,981	95,611,713
1875	2,625,883	24,206,370	28,341,150	12,916,428	699,583	3,107,297	81,087,302
1876	2,955,197	16,574,038	48,668,640	13,030,121	1,447,917	4,716,360	97,735,482
1877	2,601,142	14,164,515	47,915,728	13,506,773	1,728,865	4,990,379	94,416,399
1878	3,030,562	29,713,577	63,651,518	18,839,297	2,490,615	5,754,059	134,086,595

From the foregoing table it appears that the aggregate receipts of flour, corn, oats, rye, and barley during the year 1878 were larger than during any previous year in the history of Chicago; and that the receipts of wheat were only slightly exceeded during the year 1874. The total receipts of grain and flour reduced to bushels indicate that the receipts during the year 1878 were 260 per cent. greater than during the year 1860, and 122 per cent. greater than during the year 1870.

SHIPMENTS OF FLOUR AND GRAIN FROM CHICAGO, ILL., FOR FORTY-ONE YEARS.

The following table shows the aggregate annual shipments of flour and all kinds of grain since the settlement of Chicago to the present time, compiled from the most authentic sources :

Calendar year.	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.	Flour reduced to wheat.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1838.....		78					78
1839.....		3, 678					3, 678
1840.....		10, 000					10, 000
1841.....		40, 000					40, 000
1842.....		586, 907					586, 907
1843.....		688, 967					688, 967
1844.....	6, 320	891, 894					923, 494
1845.....	13, 752	956, 860					1, 025, 620
1846.....	28, 045	1, 459, 594					1, 599, 819
1847.....	32, 538	1, 974, 304	67, 135	38, 892			2, 243, 021
1848.....	45, 200	2, 160, 000	530, 460	65, 280			3, 001, 740
1849.....	51, 309	1, 936, 264	644, 848	26, 849		31, 452	2, 895, 958
1850.....	100, 871	883, 644	262, 013	158, 084		22, 872	1, 830, 968
1851.....	72, 406	437, 660	3, 221, 317	605, 827		19, 997	4, 646, 831
1852.....	61, 196	635, 996	2, 757, 011	2, 030, 317	17, 315	79, 818	5, 826, 437
1853.....	70, 984	1, 206, 163	2, 780, 228	1, 748, 493	82, 162	120, 267	6, 292, 233
1854.....	111, 627	2, 306, 925	6, 837, 890	3, 239, 967	41, 153	148, 411	13, 132, 501
1855.....	163, 419	6, 298, 155	7, 517, 625	1, 888, 538	19, 326	92, 011	16, 632, 750
1856.....	216, 389	8, 364, 420	11, 129, 668	1, 014, 637	591	19, 051	21, 610, 312
1857.....	259, 648	9, 846, 052	6, 814, 615	506, 778		17, 993	18, 483, 678
1858.....	470, 402	8, 850, 257	7, 726, 264	1, 519, 069	7, 569	132, 020	20, 587, 189
1859.....	686, 351	7, 166, 696	4, 349, 360	1, 185, 703	134, 404	486, 218	16, 754, 136
1860.....	698, 132	12, 402, 197	13, 700, 113	1, 091, 698	156, 642	267, 449	31, 108, 759
1861.....	1, 603, 920	15, 835, 953	24, 372, 725	1, 633, 237	393, 813	226, 534	50, 481, 862
1862.....	1, 739, 849	13, 808, 898	29, 452, 610	3, 112, 366	871, 796	532, 195	56, 477, 110
1863.....	1, 522, 085	10, 793, 295	25, 051, 450	9, 234, 858	651, 094	946, 223	54, 287, 345
1864.....	1, 285, 343	10, 250, 026	12, 235, 452	16, 567, 650	893, 492	345, 208	46, 718, 543
1865.....	1, 293, 428	7, 614, 887	25, 437, 241	11, 142, 140	999, 289	607, 484	52, 268, 181
1866.....	1, 981, 525	10, 118, 907	32, 753, 181	9, 961, 215	1, 444, 574	1, 300, 821	65, 486, 323
1867.....	2, 015, 455	10, 557, 123	21, 267, 205	10, 226, 026	1, 213, 389	1, 846, 891	55, 187, 909
1868.....	2, 399, 619	10, 374, 683	24, 770, 626	14, 440, 830	1, 202, 941	901, 183	63, 688, 358
1869.....	2, 339, 063	13, 244, 249	21, 586, 808	8, 800, 646	798, 744	633, 753	56, 759, 515
1870.....	1, 705, 977	16, 432, 585	17, 777, 377	8, 507, 735	913, 629	2, 584, 692	54, 745, 903
1871.....	1, 267, 574	12, 905, 449	36, 716, 030	12, 151, 247	1, 325, 867	2, 908, 113	71, 800, 789
1872.....	1, 361, 328	12, 160, 046	47, 013, 552	12, 255, 537	776, 805	5, 032, 308	83, 364, 224
1873.....	2, 303, 490	24, 455, 657	36, 754, 943	15, 694, 133	960, 613	3, 366, 041	91, 597, 092
1874.....	2, 306, 576	27, 634, 587	32, 705, 224	10, 561, 673	335, 077	2, 404, 538	84, 020, 691
1875.....	2, 285, 113	23, 184, 349	26, 443, 584	10, 279, 134	310, 592	1, 868, 206	72, 369, 194
1876.....	2, 634, 838	14, 361, 950	45, 629, 035	11, 271, 642	1, 433, 976	2, 687, 932	87, 241, 306
1877.....	2, 482, 305	14, 909, 160	46, 361, 901	12, 497, 612	1, 553, 375	4, 213, 656	90, 706, 076
1878.....	2, 779, 640	24, 211, 739	59, 944, 200	16, 464, 513	2, 025, 654	3, 520, 983	118, 675, 269

It appears from the foregoing table that the shipments of flour, corn, oats, and rye were larger in 1878 than during any previous year, and that the shipments of wheat were only exceeded during the years 1873

and 1874. The total shipments of grain and flour during the year 1878, reduced to bushels, were 281.49 per cent. greater than in 1860, and 116.77 per cent. greater than in 1870. The manufactures of flour in the city of Chicago during the last twenty-seven years are presented in the following table :

Statement showing the number of barrels of flour manufactured in Chicago from 1852 to 1878, inclusive.

Calendar year.	Flour manufactured in the city.	Calendar year.	Flour manufactured in the city.
	<i>Barrels.</i>		<i>Barrels.</i>
1852	70, 979	1866	445, 522
1853	82, 833	1867	574, 096
1854	66, 000	1868	732, 479
1855	79, 850	1869	543, 285
1856	86, 068	1870	443, 967
1857	96, 000	1871	327, 739
1858	140, 403	1872	186, 968
1859	161, 500	1873	264, 363
1860	232, 000	1874	244, 667
1861	291, 852	1875	249, 653
1862	260, 980	1876	271, 074
1863	236, 261	1877	293, 244
1864	255, 056	1878	308, 284
1865	288, 820		

It appears from the foregoing table that the quantity of flour manufactured in the city of Chicago during the year 1878 amounted to only 10.17 per cent. of the receipts of flour, and to only 11.09 per cent. of the shipments of flour during that year.

In the following statement are presented the statistics showing the receipts and shipments of cattle and hogs, and the number of cattle and hogs packed at Chicago from 1859 to 1878, inclusive.

CATTLE AND HOG STATISTICS OF CHICAGO.

Receipts and shipments of cattle for twenty years.

Calendar year.	Received.	Shipped.	Calendar year.	Received.	Shipped.
1859	111, 694	37, 584	1869	403, 102	294, 717
1860	117, 101	97, 474	1870	532, 964	391, 709
1861	204, 259	124, 145	1871	543, 050	401, 927
1862	209, 655	112, 745	1872	684, 075	510, 025
1863	304, 448	201, 066	1873	761, 428	574, 181
1864	338, 840	253, 439	1874	843, 966	622, 929
1865	330, 301	301, 637	1875	920, 843	696, 534
1866	384, 251	268, 723	1876	1, 096, 745	797, 724
1867	329, 243	216, 982	1877	1, 033, 151	703, 402
1868	323, 514	217, 897	1878	1, 083, 068	699, 108

Receipts and shipments of hogs for twenty years.

Calendar year.	Received.			Shipped.		
	Live.	Dressed.	Total.	Live.	Dressed.	Total.
1859.....	188,671	82,553	271,224	87,254	22,992	110,246
1860.....	285,149	107,715	392,864	191,931	35,233	227,164
1861.....	549,039	126,863	675,902	216,982	72,112	289,094
1862.....	1,110,971	237,919	1,348,890	446,506	44,629	491,135
1863.....	1,606,818	350,055	1,956,873	752,151	110,039	862,190
1864.....	1,285,871	289,457	1,575,328	561,277	98,115	659,392
1865.....	757,072	92,239	849,311	575,511	69,034	644,545
1866.....	933,233	353,093	1,286,326	484,793	91,306	576,099
1867.....	1,096,689	260,431	1,987,120	760,547	156,091	916,638
1868.....	1,706,592	281,923	1,988,515	1,020,812	226,901	1,247,713
1869.....	1,661,869	190,513	1,852,382	1,086,305	199,650	1,285,955
1870.....	1,693,158	260,214	1,953,372	924,483	171,188	1,095,671
1871.....	2,380,083	272,466	2,652,549	1,162,286	169,473	1,331,759
1872.....	3,252,623	235,905	3,488,528	1,835,594	145,701	1,981,295
1873.....	4,337,750	233,156	4,570,906	2,197,557	200,906	2,398,463
1874.....	4,259,629	213,038	4,472,667	2,330,661	197,747	2,528,408
1875.....	3,912,110	173,012	4,085,122	1,582,643	153,523	1,736,166
1876.....	4,190,006	148,622	4,338,628	1,131,635	79,654	1,211,289
1877.....	4,025,970	164,339	4,190,309	951,221	94,648	1,045,869
1878.....	6,339,654	102,512	6,442,166	1,266,906	26,039	1,292,945

BEEF AND PORK PACKING IN CHICAGO.*For the last twenty years, ended March 1.*

Season ended October 31.	Number of cattle packed.	Number of hogs packed.	Season, ended October 31.	Number of cattle packed.	Number of hogs packed.
1858-'59.....	45,503	179,684	1868-'69.....	26,950	597,954
1859-'60.....	51,606	151,339	1869-'70.....	11,963	688,140
1860-'61.....	34,624	271,805	1870-'71.....	21,254	919,197
1861-'62.....	53,763	505,691	1871-'72.....	16,080	1,225,236
1862-'63.....	56,687	970,264	1872-'73.....	15,755	1,456,650
1863-'64.....	70,086	904,659	1873-'74.....	21,712	1,826,560
1864-'65.....	92,459	760,514	1874-'75.....	41,192	2,136,716
1865-'66.....	27,172	507,355	1875-'76.....	63,783	2,320,846
1866-'67.....	25,996	639,332	1876-'77.....	Not reported.	2,833,486
1867-'68.....	35,348	796,226	1877-'78.....	Not reported.	4,009,311

It appears from the foregoing tables that the receipts of cattle during the year 1878 were more than nine times the receipts of the year 1860, and more than twice the receipts of 1870. The receipts of hogs during 1878 largely exceeded the receipts during any previous year. They were sixteen times the receipts of 1860, and more than three times the receipts of 1870. It will be observed that while the receipts of hogs during the year 1878 were about 50 per cent. greater than during the year 1874, the shipments during 1878 were less than half the shipments during the year 1874; but this is explained by the fact that the number

of hogs packed during the year 1878 and shipped in that form was more than twice as great as during 1874.

On pages 221 and 226 of the Appendix will be found statements showing respectively the aggregate receipts and shipments from Chicago of the leading articles of commerce for a series of years.

The growth of the various branches of the commerce of Chicago may be appreciated at a glance by inspecting the following table, showing the shipments of some of the leading commodities during the years 1860, 1870, and 1878, respectively:

Statement showing the aggregate shipments of certain leading articles of commerce from Chicago during the calendar years 1860, 1870, and 1878.

Commodities.	1860.	1870.	1878.
Flour.....barrels..	698, 132	1, 705, 977	2, 779, 640
Wheat.....bushels..	12, 402, 197	16, 432, 585	24, 211, 739
Corn.....do.....	13, 700, 113	17, 777, 377	59, 944, 200
Oats.....do.....	1, 091, 698	8, 507, 735	16, 464, 513
Barley.....do.....	267, 449	2, 584, 692	3, 520, 963
Cattle.....number..	97, 474	391, 709	699, 108
Hogs.....do.....	227, 164	1, 095, 671	1, 292, 945
Pork.....barrels..	91, 721	165, 885	346, 366
Beef.....packages..	85, 563	65, 369	67, 757
Other canned meats.....pounds..	15, 935, 243	112, 433, 168	747, 269, 774
Lard.....do.....	10, 325, 019	43, 292, 249	244, 323, 938
Butter.....do.....		6, 493, 143	44, 507, 599
Wool.....do.....	839, 269	15, 826, 536	43, 009, 697
Hides.....do.....	14, 863, 514	27, 245, 846	51, 875, 447
Seeds.....do.....	6, 055, 563	6, 287, 615	95, 441, 270
Lead.....do.....	8, 392, 066	7, 853, 471	22, 772, 000
Lumber.....feet.....	225, 372, 340	583, 490, 634	626, 735, 118

Nothing need be added by way of comment in order to convey the force of these statistics indicative of the wonderful growth of the city of Chicago and of the development of the agricultural and commercial interests of the great Northwest, of which it is the most conspicuous representative.

Thus far the railroads extending west from Chicago have been kept separate in ownership and management from the railroads extending east from that city. The traffic interests of these two systems of roads differ in an important particular. The railroads extending westwardly gather up traffic at thousands of points in comparatively small quantities; whereas at Chicago, the eastern trunk lines are enabled at all times promptly to load cars and trains which pass directly to their destination at the Atlantic seaport, or to interior points in the Atlantic seaboard States. The railroads extending west from Chicago have thus far generally pursued the policy of maintaining as their share of all through rates, the rate charged for the transportation of products from interior points to Chicago or from Chicago to interior points. By so doing, those roads have been held aloof from the oft-recurring, severe,

and closely-contested wars of rates which have prevailed between the trunk roads extending from Chicago to the seaboard.

The traffic interests of the railroads extending from Chicago towards the West are closely identified with the commercial interests of that city, from the fact that, to the extent to which the products of the West seek the Chicago market, they also seek transportation over those roads.

The advantages afforded by the trade interests of Chicago to producers throughout the Northwestern States will, for the following reasons, probably continue to secure to its markets the principal share of the products of those States. A large part of the grain crops of the Northwestern States is marketed soon after being harvested. This arises in part from the necessity of realizing the proceeds of such crops as soon as possible, and, in part, from the fact that, during the autumn months, farmers have leisure for hauling their surplus products to the railroad depots, the wagon roads at that season of the year being usually in good condition. The movement of the crops from the points of production towards points of consumption is therefore quite irregular; hence arises the necessity for the offices of capital, and of great trade reservoirs at which grain may be held, in order to meet the demands for consumption throughout the year. The capital, the granaries and warehouses of Chicago supply such needs.

In the competitive struggles between operators, prices are determined by the probable future relations of supply and demand, rather than by the supply in the market at any particular time. Thus the legitimate speculative elements of a great trade center tend towards securing uniformity in prices, and, at the same time, subserve the interests of those who are engaged in the great work of agricultural production.

The principal primary markets for the purchase and sale of grain at the West are Saint Louis, Mo., Peoria, Ill., Chicago, Ill., Milwaukee, Wis., Toledo, Ohio, Duluth, Minn., and Detroit, Mich. The total shipments of grain and its equivalent of flour through these ports during the year 1878, amounted to 241,137,000 bushels, and the quantity shipped direct from the West to the Atlantic seaboard amounted to about 80,000,000 bushels. In other words, of the total eastward movement of grain, about 75 per cent. passed through western markets, and about 25 per cent. passed directly to the Atlantic seaboard without passing through such western markets.

DIRECT TRADE BETWEEN POINTS WEST OF CHICAGO AND POINTS EAST OF THAT CITY.

Notwithstanding the close relationship existing between the interests of the railroads extending west from Chicago and the commercial interests of that city, and the important relation which the capital employed in trade, the storage facilities and the commercial enterprise of that city sustain to the agricultural interests of the Northwest, there has, for several years, been a demand for direct trade between points

west of Chicago and points on the Atlantic seaboard. For several years agricultural products have also been shipped in considerable quantities directly from points in the States of Iowa and Minnesota to points in Europe.

From the beginning of the extension of railroads into the States west of the Mississippi River, there has been a tendency on the part of railway managers, especially those of the eastern trunk lines, to improve the facilities for carrying on such direct trade. This has been accomplished by connecting the tracks of roads forming continuous lines, and by the erection of union freight depots for the cheap and speedy transfer of freights. In the case of "freights moved in bulk," and of the transportation of commodities of one kind moved in large quantities or in carloads, the cars of eastern roads are sent over the western roads into Iowa, Minnesota, Wisconsin, Missouri, Kansas, Nebraska, and even into Texas and the Territory of Utah. In such cases the several roads agree as to the compensation to be allowed for the use of cars engaged in the joint traffic.

The railroad companies have also entered into agreements with ocean steamship lines, by means of which products of the States west of Lake Michigan may be shipped direct to points in Europe. In entering into arrangements with the eastern trunk lines for the accommodation of this direct trade, the western railroads have been compelled, by the force of circumstances, to provide for the direct transportation of both east-bound and west-bound merchandise through Chicago, notwithstanding the fact that the traffic interests of these roads are most intimately connected with, and to a very great extent dependent upon, the trade interests of that city.

It is impossible to ascertain the relative proportion of the products of the States and Territories west of Lake Michigan which is marketed at Chicago, and which is shipped directly east through that city, either to interior points in the Atlantic seaboard States, or to the Atlantic seaports or directly to foreign countries. The direct movement of commodities from the West to the East through Chicago must, therefore, be illustrated by means of special statements.

(a.) It is stated by Col. Milo Smith, of Clinton, Iowa, a gentleman employed as an expert by this office, that there is a very large and rapidly growing direct trade between interior points in the State of Iowa and the Atlantic seaboard States, and also between such points and foreign ports. He alludes especially to shipments directly to Scotland and England.

Attention is called to the report of Colonel Smith, which will be found at page 97 of the appendix.

(b.) Mr. William H. Miller, secretary of the Board of Trade of Kansas City, states that about 75 per cent. of the grain shipped east from that city is transported directly to Atlantic seaports, and that substantially all the provisions shipped eastward from that city go directly to Atlantic seaports.

(c.) It is stated upon reliable authority that nine-tenths of the shipments of cattle from the States west of Lake Michigan are marketed at Chicago and Saint Louis. Within the last two years, however, live stock has, to a considerable extent, been shipped directly from points west of the Mississippi River to European markets, the persons in charge of the cattle sometimes accompanying them from the point of shipment in the West to the point of destination in Europe. This is an interesting fact at the present time, as the shipment of live cattle is generally regarded as a branch of commerce now in its infancy, and having the promise of a large development.

(d.) It is estimated by Mr. Charles Randolph, secretary of the Chicago Board of Trade, that 92 per cent. of the grain, 35 per cent. of the flour, and 95 per cent. of the provisions which reach that city by rail are marketed there, the remaining portions of the several classes of commodities passing through that city on orders or consignments to eastern markets.

Mr. Randolph also says:

There is some movement of western products from interior points west of Chicago, on through bills of lading, direct to Europe, a portion of such shipments passing through Chicago, and a portion via lines running south of this city. From the best information I am able to obtain, I do not think the aggregate of such shipments from interior points in Illinois and Iowa exceeded 10,000 tons in 1878. The commodities so shipped directly to Europe are mainly hog products, corn-meal, oat-meal, and wheat-flour.

The advantages afforded by the market at Chicago, as compared with the advantages afforded by the possibility of direct shipments from points west of Chicago to the seaboard through that city, are clearly presented by Mr. Randolph in reply to the following inquiry:

Question. Is it true that the advantages which Chicago possesses as a market often-times constitute it a relatively better market for the sale of agricultural products than New York or Liverpool? In other words, is it true that, during a very considerable part of the year, producers of grain throughout the States west of Chicago can do better by selling their grain in the Chicago market than they could by shipping it directly to New York or Liverpool on through bills of lading? Or, to put the question in still another form, is it only occasionally, or with respect to exceptional movements, that the direct shipment of grain and other products from points west of Chicago to the Atlantic seaport, or to ports in Europe, affords better results than could be realized by the sale of the same products in the Chicago market? In order that you may clearly appreciate the object which I have in view, let me follow these questions by another of the same import, namely, does not the whole force of the commercial enterprise of Chicago compete with the inducements to ship directly through Chicago or around Chicago to some point further east?

Answer. The current prices of almost all grains are usually higher, relatively, in Chicago than in New York, that is to say, a bushel of grain shipped by a producer from a point west of Chicago will almost always net him more, if shipped to Chicago for sale there, than if shipped through Chicago to New York for sale there, with a view of saving Chicago charges. To do this he must ship by all rail. As illustrating this, I find that the average price of No. 2 spring wheat in Chicago during 1878, simply computing the average of daily prices without reference to quantities, was about 96.56 cents per bushel. Out of this, if sold on arrival, there would be but 1 cent commission. The

average price of the same wheat in New York, by Mr. Walker's tables, was a shade under 113½ cents, from which would be about 2½ cents New York charges, making a difference of, say, 15½ cents. The average freight by all rail was about 16.8 cents per bushel, showing about 1.3 cent per bushel in favor of the Chicago shipment for that year on wheat. Besides this, it is admitted that there is more loss in weight, which the shipper must stand, on shipments to New York than to Chicago. And, again, there is a difference of about ten to twelve days in the time of getting final returns in favor of the Chicago shipment. The speculative character of the Chicago market tends to keep up prices to all they will bear as compared with other markets, and it not infrequently occurs that prices at Chicago are materially higher, relatively, than those of the seaboard cities. Of course, it is felt to be the interest of all Chicago merchants to invite as large a volume of trade to the city as is practicable.

During the year 1878, however, there was but a small proportion of the surplus agricultural products of the Northwest shipped through or around Chicago and Milwaukee, without being marketed at either one or the other of those cities; and it is believed, from the force of the circumstances already mentioned, that those cities will continue, as primary markets, to control by far the larger part of the surplus agricultural products of the Northwest.

This direct shipment of the surplus products of the States west of Chicago to points in Europe, without being marketed either at Chicago or at Atlantic seaports, is as yet insignificant in comparison with the volume of such products which either passes through the primary markets of the West, or through the markets of the Atlantic seaboard.

Besides the eastward shipments of commodities from points west of Chicago through that city, shipments are made over lines which do not pass through that city, but which compete sharply with the lines tributary to it, and whose interests are closely identified with commercial cities, rivals of Chicago. This is especially the case in regard to the Wabash Railroad and its numerous branches, and the line across Lake Michigan from Milwaukee with its eastern connections. The facts in regard to such shipments are stated somewhat at length in another connection.

An attempt has been made to obtain statistics showing the proportion of the freight moved west from Chicago, which was actually purchased in that city, and the proportion of it which merely passed through that city from points at the East on through bills of lading. It has not been possible to do this, owing in a great measure to the fact that such information has not been of sufficient interest to the railroad companies engaged in this traffic to induce them to collect and publish it. But even if the railroads were to collect such data upon the subject as they might be able to present, the information would be unsatisfactory, for the reason that there is a very large amount of freight brought from the East and stored at Chicago, and afterwards forwarded to more westerly points of destination without paying to that city any tribute other than that connected with expenses of storage and commissions. If the railroad companies were to publish information in regard to tonnage passing directly through Chicago, they would be compelled to re-

gard this class of traffic, merely stopping at Chicago in transitu, as a part of the local traffic of that city, since they would not be able to distinguish between it and commodities actually sold in that city.

The general subject of direct west-bound shipments to points west of the Mississippi River, may be illustrated by the following special statements :

(a.) It has been ascertained that the total traffic shipped from the four principal Atlantic seaports, viz, Boston, New York, Philadelphia, and Baltimore, to the Missouri River points, namely, Kansas City, Atchison, Leavenworth, and Saint Joseph, constitutes only about 8 per cent. of the total traffic shipped by the Chicago and Saint Louis railroads from those cities, respectively, to the Missouri River points.

(b.) Besides the all-rail shipments from Atlantic seaports just alluded to, there are many shipments from manufactories at the East to points west of Chicago and Saint Louis. From Pittsburgh are shipped, in larger quantities than from any other point, iron, steel, and glass, and manufactures thereof, on through bills to Missouri River points, and to many other points west of Chicago and Saint Louis.

From Cleveland, the chief oil-refining center of the country, is shipped to all these points, on through bills, a very large proportion of the coal-oil consumed throughout the States and Territories west of Chicago and Saint Louis.

(c.) There are large quantities of freights shipped by lake directly from Buffalo and other manufacturing centers at the East, to Chicago, and thence on through bills issued at the eastern point of shipment, to the destination of such freights west of Chicago and west of Saint Louis.

(d.) It is estimated by Mr. J. W. Midgley, commissioner of the South-western Railway Association, that fully two-thirds of the eastern traffic shipped west from Chicago and Saint Louis, originates east of those points. This estimate includes both commodities shipped on through bills from the East, and commodities purchased by the merchants of Chicago and Saint Louis, and thence shipped to points further west.

The subject of direct shipments from the Atlantic seaboard to interior points is more fully treated of in another section of this report.

As yet no provision of law has been made for the direct importation of foreign merchandise at interior points west of Chicago, no adequate demand having yet arisen for the establishment of such facilities.

LIMITS OF THE COMMERCE OF CHICAGO.

The growth of the commerce of Chicago has corresponded with and closely followed the extension of its facilities for transportation. In the year 1854, the first railway line was completed from that city to the Mississippi River. Prior to that time its trade was confined to comparatively narrow limits, but, year after year, one line after another has been pushed westward, until the Mississippi River is crossed by thirteen railroad bridges at points between Saint Paul and Saint Louis. These rail-

roads are now the highways of the most important commercial movement on this continent.

In the year 1873, an unbroken railroad line was completed from Chicago to San Francisco by the completion of the bridge across the Missouri River at Omaha.

As a result of the various combinations which have been formed between railroads, and between railroads and ocean steamer lines, the city of Chicago now enjoys the advantages of direct trade with the Atlantic seaports and all the important points in the Atlantic seaboard States, with New Orleans and the more important points throughout the South Atlantic and Gulf States, with San Francisco and important points in the States of the Pacific slope, and all centers of trade between the Mississippi River and the Pacific coast, with the countries of Europe, and with China and Japan.

The ultimate limits of the direct commerce of Chicago are therefore world-wide, as is also the case with respect to all the other principal commercial cities of the country. Thus each commercial city competes, either directly or indirectly, with every other commercial city, the commerce of each being limited by the competitive forces of transportation and of trade. But in the sense of being a primary market for the purchase and sale of agricultural products, and for supplying general merchandise to the States and Territories in which such agricultural products are grown, the territorial limits of the trade of Chicago embrace the States of Wisconsin, Northern Michigan, Minnesota, Iowa, Northern Missouri, Kansas, Nebraska, Dakota, Colorado, Indian Territory, and the other Territories as far west as the eastern borders of the States of California and Oregon, an area constituting more than one-half the territorial limits of the United States, exclusive of Alaska.

The agricultural and mineral development of the principal part of this vast domain is yet in its infancy.

Although these States and Territories are directly tributary to the commerce of Chicago, with respect to the sale of the products of agriculture and of mining, and the purchase of general merchandise, that city exercises no undisputed commercial control over any part of this rapidly developing section of the country. With respect to the trade of Minnesota, Wisconsin, and Northern Michigan, Chicago meets an active competition in the commercial enterprise of Milwaukee, and with respect to the commerce of Southern Iowa, Northern Missouri, Southern Nebraska, the State of Kansas, and of all the trade towards the Southwest, Chicago meets a sharp competition in the commercial enterprise of Saint Louis. Furthermore, at every important point throughout this territory there are afforded facilities for the direct shipment of produce to Atlantic seaports over lines of transport north of Chicago, south of Chicago, and through Chicago. Besides, by means of the same facilities, the merchants of the great Atlantic seaports are continually competing with the merchants of Chicago for the sale of general merchandise at every

important point throughout the same territory. In a word, the influence which Chicago exercises over the commerce of the territory above described, is limited and restricted by all those competitive forces in trade which have made each commercial city an effective competitor of every other commercial city in the country; forces which prevent the merchants of any one city from exercising an undue influence over prices, secure vigilance in the prosecution of trade, and afford a guarantee for honorable dealing. These competitive forces of trade also indirectly but imperatively, control the freight rates which may be charged by the railroads tributary to, and chiefly dependent upon, the commerce of the various cities.

The completion of the Northern Pacific Railroad, and of the lines extending towards New Mexico which will ultimately form a connection with the Southern Pacific Railroad, and the rapid increase of railroad construction in the States and Territories west of Chicago, promise to add greatly to the commercial prosperity of that city as well as to that of her commercial rivals at the North and at the South.

The city of Chicago is not only a great commercial city but also an important manufacturing center. The value of its manufactures during the year 1878 is stated by The Western Manufacturer of Chicago to have amounted to the sum of \$267,708,000. The commerce of the city of Chicago embraces, therefore, its purely distributive commerce, *i.e.*, the trade of the city in articles purchased and sold by its merchants, and also the commerce in the articles manufactured, which may be styled its *productive commerce*.

The trade of the city, in almost every commodity, has different geographical limits. Any elaborate treatise upon the subject would, therefore, transcend the limits of this report. This subject may be dismissed by presenting the answers furnished by Mr. Charles H. Randolph, secretary of the Board of Trade of Chicago, to two general inquiries submitted to him by this office:

Question. At about what points on the line of the Pacific Railroad does the general jobbing trade of Chicago meet the jobbing trade of San Francisco; and within what limits does the jobbing trade of Chicago overlap that of San Francisco?

Answer. I find some difficulty in fixing any one point in either direction that might be said to be the dividing line of the trade of Chicago and other cities. Some lines of our trade, for instance that of boots and shoes, extend over a larger area of territory than others. From the best information I can get I should say that the supplies of nearly the whole of Utah are drawn from the east, largely from Chicago, though, of course, eastern and other cities supply a portion. Nevada is more or less competitive ground for eastern merchants and those on the Pacific coast. Chicago has a large trade as far west as Reno, which takes in about all of Nevada. This trade is largest in mining machinery and supplies, boots and shoes, and dry goods.

Question. Has Chicago any considerable jobbing trade south of Cairo, in the States east of the Mississippi River? And, if so, please to state at about what point the jobbing trade of Chicago meets that of New Orleans, and about how far such trade of Chicago overlaps the similar trade of New Orleans?

Answer. The Chicago trade in boots and shoes extends to and beyond Nashville,

Tenn., and in Eastern Tennessee and Georgia. Dry goods and drugs go nearly as far, but in less volume. The Chicago trade in boots and shoes probably extends over a larger area of territory than any other. Chicago manufacture of these articles is largely of the coarser and medium qualities, best adapted to the western and southern trade.

TRANSPORTATION LINES WHOSE TRAFFIC INTERESTS ANTAGONIZE THE INTERESTS OF THE CHICAGO RAILROADS AND THE COMMERCIAL INTERESTS OF THAT CITY.

The degree of prosperity which a commercial city enjoys is determined as well by the influences which tend to antagonize as by those which tend to promote its trade interests. It therefore appears proper to present in this connection a few statements in regard to the traffic interests of those transportation lines which are competitors of the railroads directly tributary to the city of Chicago, and which in their traffic interest are closely identified with cities at rivalry with that city.

The statements made in this connection as to circumstances which affect the transportation and commercial interests of Chicago, will also serve to illustrate the complicated conditions which, under the present facilities for direct transportation by rail, surround the commercial interests of almost every important city in the country.

Attention may be directed, first, to the several railway lines which, with their eastern connections, extend from Saint Louis to the Atlantic seaboard. All these roads compete through the markets of the city of Saint Louis with the roads extending east and west from the city of Chicago.

Next may be mentioned the Wabash Railway. This road, by means of its several branches and eastern and western connections, has thus far been able to compete with the Chicago roads at many points in the States of Illinois, Missouri, Iowa, Nebraska, and portions of Minnesota. The principal western connections of the Wabash Railway are the Hannibal and Saint Joseph Railroad; the Toledo, Peoria and Warsaw Railroad; the Saint Louis, Kansas City and Northern Railway; the Missouri, Kansas and Texas Railway; the Central Railway of Iowa; and the Kansas City, Saint Joseph and Council Bluffs Railroad.

In order to secure competitive traffic, the Wabash Railway has at times carried produce at rates so much lower than the rates via Chicago as not only to compete successfully with the Chicago roads, but also to overcome the advantages afforded by the Chicago market. A diversion of traffic from Chicago and the Chicago railroads of any considerable magnitude has, however, in every case been followed by a war of rates, by means of which the managers of the Wabash Railway have been led to accede to the establishment and maintenance of new rates or to an apportionment of traffic, which has gained the assent of the managers of all the competing lines.

The interests of the Wabash Railway are closely identified with the commercial interests of its eastern terminus, the city of Toledo. That

city has thus become an active competitor of the city of Chicago for the purchase of grain and flour. At Toledo the Wabash Railway has the advantage of the cheap lake and canal transportation to the seaboard. It is also asserted that, in making competitive rates from points in the northwest to the Atlantic seaboard, the Wabash Railway has had the co-operation of two more connecting roads extending east to the Atlantic seaboard.

The line across Lake Michigan from Milwaukee to Grand Haven, in connection with the Detroit and Milwaukee Railroad and its eastern connections, also operates as a direct competitor of the Chicago lines for the transportation of the agricultural products of Wisconsin, Northern Iowa, and Minnesota.

The railroads extending east and west from Chicago have found it an exceedingly difficult matter to enter into agreements as to the establishment of rates with the managers of the Wabash Railway, or with the managers of the rail and water lines extending east from Milwaukee, or to maintain such rates when made.

The Chicago railroads also meet active competition in the water line from Duluth, Minn. to New York City via the lakes, the Erie Canal, and the Hudson River; or by the lakes to Buffalo and from other eastern lake ports thence by railroad to the Atlantic seaboard. In order to meet the competition of the Duluth route, an abatement or discriminating rate is made by the Chicago railroads in favor of the transportation of all such productions of the State of Minnesota which would be likely to reach the seaboard by the way of Duluth and the lakes.

There are several other water routes via western lake ports which, through eastern and western connecting lines, compete with the various transportation lines of Chicago, and also, directly or indirectly, subserve the interests of towns and cities at rivalry with the commercial interests of that city.

The foregoing statements upon this subject have been made with the view of illustrating the general fact that the competitive influences of transportation and of trade are exceedingly diversified, and present with respect to each commercial city a separate transportation and commercial problem.

5.—THE COMMERCIAL AND TRANSPORTATION INTERESTS OF KANSAS CITY.

The commercial situation of Kansas City and Saint Joseph, Mo., is in several respects quite similar to that of Leavenworth and Atchison, Kans. Among railroad managers these four cities are commonly known as the "Missouri River points," reference being had to their geographical position and to similarities in regard to their transportation interests. This is more fully described in chapter No. 6 of this report.

As the commercial and transportation interests of particular cities are treated of in this report not merely as local questions, but in their rela-

tions to the general commerce of the country, it has been deemed sufficient to refer to but one of the Missouri River points, namely, Kansas City, from the fact that it is the largest and, with respect to the magnitude of its commerce, the most important of them all.

Within the last ten years Kansas City has become one of the important primary markets of the West for the purchase and sale of products of agriculture. The receipts and shipments of commodities at that city, by each transportation route, during the year 1878, are presented in the tables prepared by Mr. W. H. Miller, secretary of the Board of Trade of Kansas City, in his statement in reply to inquiries addressed to him by this office. (Appendix, pages 92 to 96 inclusive.)

The present population of Kansas City is stated to be about 60,000. There are now at that point eight grain elevators, having a storage capacity of 1,510,000 bushels, and a daily transfer capacity of 395,000 bushels. There are also four large packing-houses, one of which is said to be the largest combined beef and pork packing-house in the world. During the year 1878, there were packed at Kansas City 18,756 cattle and 349,097 hogs.

A description of the railroads tributary to the commercial interests of Kansas City will be found on pages 251 and 252 of the appendix.

The commercial movements of Kansas City are shown in detail in the tables on pages 94 to 96 of the Appendix.

The general features of those movements are illustrated by the movements of flour, grain, and provisions during the year 1878. In order to present a statement of this kind, the secretary of the board of trade of Kansas City has classified the transportation lines of that city, as follows:

North roads.

The Missouri Pacific Railroad from Kansas City to Atchison.
The Kansas City, Saint Joseph and Council Bluffs Railroad.

South roads.

The Kansas City, Fort Scott and Gulf Railroad.
The Kansas City, Lawrence and Southern Railroad.
The Missouri, Kansas and Texas Railroad.

East roads.

The Missouri Pacific Railroad from Kansas City to Saint Louis.
The Wabash, Saint Louis and Pacific Railway.
The Chicago and Alton Railroad; Chicago, Rock Island and Pacific Railroad.
The Hannibal and Saint Joseph Railroad; Kansas City and Eastern Railroad.

West roads.

The Kansas Pacific Railway.
The Atchison, Topeka and Santa Fé Railroad.

The movements of grain and flour to and from Kansas City are stated as follows, in tons of 2,000 pounds:

	Tons.
Received from the north	2,278
Received from the south	5,911
Received from the east	1,852
Received from the west	25,303
	Tons.
Shipped to the north	None.
Shipped to the south	343
Shipped to the east	43,151
Shipped to the west	2

It appears from this statement that 6.45 per cent. of the receipts of flour and grain was from the north, 16.72 per cent. from the south, 5.24 per cent. from the east, and 71.59 per cent. from the west.

Of the shipments of flour and grain 99.19 per cent. was to the east, 0.02 per cent. to the west, 0.79 per cent. to the south, and none to the north.

The movements of provisions are shown as follows:

	Tons.
Receipts from the north	50
Receipts from the south	1
Receipts from the east	114
Receipts from the west	56
	Tons.
Shipments to the north	299
Shipments to the south	1,664
Shipments to the east	1,236
Shipments to the west	536

The provisions shipped from Kansas City are almost entirely the products of cattle and hogs received and slaughtered at that point.

It will be seen that of the total receipts of provisions 22.62 per cent. were from the north, 0.45 per cent. from the south, 51.59 per cent. from the east, and 25.34 per cent. from the west; and that of the total shipments of provision 8.01 per cent. was to the north, 44.55 per cent. to the south, 33.09 per cent. to the east, and 14.35 per cent. to the west.

The western shipments of provisions are chiefly to the mining regions of Colorado, New Mexico, Wyoming, Utah, and the Pacific slope.

The southern shipments of flour and grain were very small in amount, but provisions were very largely shipped south into Texas over the Missouri, Kansas, and Texas Railroad. The amount of shipments to New Orleans and to the Gulf States east of the Mississippi River was inconsiderable.

Notwithstanding the fact that Chicago and Saint Louis are the eastern termini of the railroads extending from Kansas City towards the east, with the exception of the Hannibal and Saint Joseph Railroad, and the Wabash, Saint Louis and Pacific Railroad, and that the traffic interests of those roads are most intimately connected with the commercial

interests of their respective eastern termini, yet it appears that about 75 per cent. of the grain shipped east from Kansas City moves direct to the Atlantic seaboard, about 5 per cent. to Chicago, and not over 1 or 2 per cent. to Saint Louis. It is stated by the secretary of the board of trade of Kansas City, that substantially all the provisions shipped east from that point go to Atlantic seaports directly, and that all the flour shipped east from that point is shipped directly to points east of Saint Louis and Chicago, none of it being marketed at either of those cities.

As yet, the amount of grain and provisions shipped from Kansas City directly to Europe on through bills of lading is quite small. A large amount of provisions is, however, shipped to New York in care of steamship lines, and is from thence shipped to Europe; but the merchants of Kansas City do not control such shipments beyond New York City. These shipments of provisions are made in part subject to the discretion of the New York merchant to sell in that city or to forward to Europe. A smaller part is shipped directly to ports in the United Kingdom, the New York merchant merely arranging for transportation and assuming the care of the property beyond that city.

Direct shipments from Kansas City to the east are not made over routes avoiding Saint Louis and Chicago, as under the agreement of the Southwestern Railway Association (hereinafter described), 45 per cent. of all the eastward traffic from the four Missouri River points (Kansas City, Leavenworth, Atchison, and Saint Joseph), passes over roads leading to Chicago, 45 per cent. over roads leading to Saint Louis, and 10 per cent. by the way of Hannibal and Toledo. In other words, 90 per cent. of the entire eastward shipments from Kansas City passed through Chicago and Saint Louis to their more eastern points of destination.

These facts serve to illustrate the growing tendency of eastern buyers to purchase at primary markets, and thus to avoid all unnecessary handling of western produce at intermediate points. Considerations of this character also prompt direct orders from Europe at the primary markets of the west.

The facilities afforded for direct shipments over connecting lines, and the advantages enjoyed by the merchants of Kansas City in the low through-rates which prevail as the result of the competition of rival transportation lines, enable them to exercise the option of purchasing goods at Saint Louis, at Chicago, at the Atlantic seaports, or at manufacturing in various parts of the country.

The statements of ten business houses of Kansas City, presented in chapter No. 16 of this report, show that about 9 per cent. of their purchases of general merchandise are made at Saint Louis, 3 per cent. at Chicago, 31 per cent. at New York, 47 per cent. at all Atlantic seaports, including New York, about 41 per cent. of the purchases are made from manufacturers and other producers in various parts of the country.

Boots and shoes are purchased at New England factories; hats, in the eastern cities; hardware, at Pittsburg and Wheeling, and in Connecti-

cut and New Jersey; and wines and liquors mostly in California and Kentucky.

Wholesale traders buy almost exclusively at "first hands" of manufacturers or their agents. Goods manufactured in Europe are also, to a considerable extent, imported directly.

Mr. W. H. Miller, secretary and treasurer of the Kansas City board of trade, in forwarding the returns of the merchants of that city as to the points at which these purchases are made, adds the following statement:

The jobbing-merchants of Kansas City purchase their goods exclusively of manufacturers or their agents. They do not as a rule buy goods of jobbers. Purchases made in Saint Louis and Chicago consist of articles manufactured in those cities. Purchases in New York are made from manufacturers or their agents and from importers. The retail houses of this city are supplied mainly by our own jobbers. Some of our larger retail dry goods houses employ purchasing-agents in New York, and thus get all their goods at first hands, while our crockery merchants, engaged in both wholesale and retail trade, import for themselves all their foreign goods, and purchase American goods of manufacturers only.

Kansas City merchants are enabled to transact business in this way, in consequence of combinations entered into by railroad companies, under which goods may be transported directly from the points at which they are purchased to this city, thus saving intermediate jobbers' profits, and in many cases the difference between local and through freight rates.

I regard such combinations of connecting lines as of great advantage, both to the railroad companies and to the public, and hope the time will come when the system of direct shipments shall be so generally extended that every railroad company in the country may have the full benefit of it.

The foregoing facts not only indicate the course of commerce at that comparatively new outpost, Kansas City, but they serve also to show the results of the facilities which have been provided for direct trade with remote markets by means of connecting lines.

The requirements of commerce and the evident possibilities of railroad transportation, have compelled railroad companies to afford extensive facilities for shipment upon through bills of lading, without any supervision on the part of the shipper between the point of shipment and the point of delivery, and there is a constant demand in this country for the extension of such facilities for direct transportation.

6.—THE COMPETITION BETWEEN CHICAGO AND SAINT LOUIS, AND BETWEEN THE TRANSPORTATION LINES TRIBUTARY TO THOSE CITIES, FOR THE TRADE OF THE STATES AND TERRITORIES LYING WEST OF THE STATE OF MISSOURI.

The competition, which has existed for several years between rival railroads terminating respectively at Chicago and Saint Louis, for the trade of Kansas, Southern Nebraska, Colorado, and New Mexico, has an important bearing upon the commercial interests of those cities. The subject is regarded as of especial interest in this report, from the fact that it serves to illustrate some of the more important conditions surround-

ing and governing the internal commerce of the country. It is for this reason, rather than on account of the local or sectional interests involved in the subject, that it is here presented somewhat at length.

A large part of the trade of the section referred to centers at Kansas City and Saint Joseph, Mo., and at Leavenworth and Atchison, Kans. These four towns are commonly known as the "Missouri River points." The Kansas Pacific, the Atchison, Topeka and Santa Fé, the Atchison and Nebraska, and the Saint Joseph and Denver City Railroads, and several local roads in the State of Kansas have their eastern termini at these points. These roads bring to the Missouri River points a large proportion of the surplus products of the States of Kansas and Colorado, of the southern part of Nebraska, of the Indian Territory, and of New Mexico.

Kansas City is the largest, and, in a commercial point of view, the most important of the Missouri River points. Some of the leading facts in regard to the trade of these four towns, and especially of Kansas City, are presented in the preceding chapter of this report and in the report made to this office by Mr. W. H. Miller, secretary of the Kansas City Board of Trade, Appendix, page 92.

The competition for the trade of the Missouri River points presents itself under a twofold aspect, first as between rival markets, and second as between rival lines of transportation.

The principal cities engaged in the struggle for the trade of the Missouri River points are the western cities: Chicago, Saint Louis, and Toledo, and the seaboard cities: Boston, Philadelphia, Baltimore, and New York—especially the latter city.

The interests of the railroads which connect the Missouri River points with Chicago and with Saint Louis, respectively, are closely identified with the commercial interests of those cities, but the competition existing between these rival roads is exerted independently of the competition existing between the trade interests of the two cities. This is inevitable, from the fact that every railroad has traffic interests entirely independent of, and in some cases antagonistic to, the interests of the terminal city upon which its traffic interests mainly depend, and also from the fact that the interests of almost every commercial city are subserved by transportation lines whose traffic interests are chiefly identified with the commercial interests of rival cities.

The struggle which has been going on for several years between the cities of Chicago and Saint Louis for the trade of the Missouri River points, and of the territory west of those points, in connection with the contest between the railroads connecting those points with the cities of Chicago and Saint Louis, serves strikingly to illustrate the statements made in another section of this report in regard to the growth of direct traffic between distant points, and the fact that direct transport has tended to give to all trunk lines certain traffic interests which are entirely independent of the commercial interests of the cities with which their interests are most closely identified.

The lines from the Missouri River points to Chicago connect at that city with the great trunk lines extending to the Atlantic seaports and with the Lakes and Erie Canal.

The railroads from the Missouri River points to Hannibal and Quincy connect at the latter points with the Wabash Railroad, extending to Toledo, and thence with several trunk lines extending to the seaboard, and also with lake and Erie Canal navigation to the city of New York.

The lines from the Missouri River points to Saint Louis connect at that city with several trunk lines extending to the Atlantic seaboard, and with several railroads and with navigation on the Mississippi River to points in the Gulf States.

The struggle between the cities of Chicago and Saint Louis for the trade of the Missouri River points began soon after the completion of direct rail connections between these points and the cities of Saint Louis and Chicago.

As a result of the combinations of various kinds entered into between railroads affording the facilities of direct trade on through bills of lading the cities of Boston, New York, Philadelphia, and Baltimore, and many commercial and manufacturing towns and cities situated between the seaboard and the Mississippi River, have also become active competitors for the trade of the Missouri River points. Owing to the fact that the roads connecting those towns with Chicago and Saint Louis have thus far pursued the policy of maintaining their own rates on through traffic, independently of the connecting roads, the cities of Chicago and Saint Louis have enjoyed great advantages in securing the trade of these points. The railroad companies have pursued this line of policy from the motive of promoting their own interests, and of promoting the commercial interests of Saint Louis and Chicago, in so far as the interests of those cities are identical with their own.

The history of the struggle between the competing roads connecting Chicago and Saint Louis, respectively, with the Missouri River points, furnishes an instructive view of the more important circumstances surrounding the trade of that section of the country lying west of the State of Missouri, south of Nebraska, and east of the Rocky Mountains.

While the traffic of the Missouri River points was small, and the competitors were few, there was not much difficulty in maintaining agreements as to the rates which should prevail between those points and Chicago and Saint Louis, respectively; but as the traffic grew and the number of competitors increased, competition became sharper, and a struggle ensued. During the progress of this struggle it became more and more difficult to enter into agreements as to rates, and the difficulty of maintaining rates after they had been agreed upon also increased. For a long time freights were carried without profit, and sometimes at an actual loss to the railroad companies. In order to maintain their control over rates west of these cities, the managers of the several Saint Louis and Chicago roads met at Saint Louis May 4, 1876, and entered

into an agreement, first, as to the maintenance of rates; second, as to the differences which should prevail between the Saint Louis and Chicago rates to and from the Missouri River points. It was also agreed that no through rates between the seaboard and the Missouri River points should be accepted, unless full agreed rates west of Chicago and Saint Louis were allowed. In the absence of any agreement as to the share of the traffic which each road should be allowed to carry, the arrangement did not succeed very well.

At last it was realized by the managers of the several lines that rates could only be maintained by first agreeing as to the share of the competitive traffic which each road should be permitted to carry. The fact that this expedient (commonly known as the pooling of traffic) had been successfully tried in other parts of the country, commended it to the Saint Louis and Chicago companies. The resort to pooling was influenced, to a great extent, by the fact that in the spring of 1876 the trunk lines extending from Chicago and Saint Louis to the East had been engaged in a war of rates which threatened to involve the western roads.

On the 12th of September following [1876], a division of the earnings derived from the traffic was agreed upon between the several lines. The organization formed for effecting this purpose was known as the Southwestern Railway Rate Association. The main features of the agreement were as follows: All freight business, except lumber, which passed between Chicago, Hannibal, or Saint Louis, and Saint Joseph, Atchison, Leavenworth, or Kansas City, to, through, or beyond any of the points named, in either direction, was embraced in the agreement. The managers of the several roads in the association constituted its board of managers. The executive committee was composed of three members. They elected a secretary, who also became secretary of the association. For the sake of convenience in establishing rates and dividing earnings, two divisions were created, viz: The Saint Louis division, comprising the following roads: The Missouri Pacific, the Saint Louis, Kansas City and Northern, and the Hannibal and Saint Joseph, to the extent of its business via Hannibal, and the Kansas City, Saint Joseph and Council Bluffs Railway to the extent of its business to Saint Louis; and the Chicago division, comprising the following roads, viz: The Chicago and Alton, the Chicago, Burlington and Quincy, the Chicago, Rock Island and Pacific, the Hannibal and Saint Joseph, to the extent of its business via Quincy, and the Kansas City, Saint Joseph and Council Bluffs, to the extent of its business to and beyond Chicago. The general freight agents prepared schedules of rates of freight and submitted them to the board of managers. When approved by the latter, no deviation therefrom was allowed except by consent of the executive committee. Rates were so adjusted, that the through rates between the Missouri River points and the seaboard were the same, via Saint Louis, Hannibal, and Chicago. The through traffic was divided equally between the two divisions above-described. Each road furnished the

secretary of the association with a detailed monthly statement of all business embraced within the association, and that officer made the required adjustment between the two divisions. After deducting 50 per cent. for operating expenses, he distributed the remainder among the lines in such proportions as were from time to time agreed upon. It was provided that all contracts as to rates to preferred shippers, previously entered into by the several lines, should be carried out; but upon the expiration of such contracts, no special rates were to be made by any of the companies. No penalty for violation of the agreement was provided, the managers of the several lines being put upon their honor faithfully to observe the obligations entered into. Under this agreement, the association operated for one year.

All the parties to this arrangement profited by it, yet it did not prove entirely satisfactory. It became evident that some plan must be devised to compel members to be honest by removing from them the temptation to be dishonest. Experience had developed certain defects in the organization. These were sought to be remedied by a new agreement, which was drawn up by the secretary. This agreement went into effect September 1, 1877, and embraced the same parties, organization, and divisions as the former agreement, but the only regard paid to divisions was in the establishment of rates. The gross earnings on all competitive business to and from the points already mentioned were divided, each road being allotted a fixed percentage, and the proportions were to remain unchanged for one year. The division of traffic was based mainly upon the business done by the several roads during the previous year.

A clearing-house was created, under the control of the secretary, who was required to audit all accounts and settle balances between the parties. Payments of balances were made promptly as declared and advised by the secretary.

No attempt was made to secure the agreed distribution by forcing traffic over a particular line. The business of the previous year had divided itself so evenly that it was believed a similar result would again be reached. Besides, there was no inducement for any one of the lines to exceed its proportion, because, in such event, it was required to pay over the entire excess. The secretary advised that the roads doing an excess of business should retain 35 per cent. to pay for operating expenses, but the association decided otherwise. Five months afterward the combined roads agreed to allow to each road 30 per cent. for operating expenses, and made the rule retroactive, so as to include all previous settlements under the new agreement. It was also agreed that other roads might be admitted into the association, provided that in each case unanimous consent should be granted. No cognizance was taken of local business in this pooling arrangement. It was, however, clearly seen by all parties that the maintenance of through rates protected the local traffic by preventing discrimination against it.

The details of the arrangement entered into secured to the several

roads their agreed share of the traffic competed for, provision being made for the raising and lowering of rates, as circumstances might require.

On the 14th of March, 1878, the Southwestern Railway Rate Association was disrupted by the withdrawal of the Saint Louis roads. This was caused by the following circumstances: During the winter of 1877-'78 there was a considerable diversion of grain to New Orleans for transportation to Europe, in consequence of the abundance of tonnage available at that port. Navigation by lake and canal from Chicago to New York was at that time suspended, and the eastern trunk-lines were maintaining their rates. The result was that the price of grain was relatively higher at Saint Louis than at Chicago, and, consequently, there was a large increase in the grain trade of the former city. This disturbed the former balance of traffic as between the two cities.

After paying to the Chicago companies about \$150,000, in order to adjust balances under the pooling agreement of the association, the Saint Louis companies resolved to discontinue their connection with it, believing the increased movement of grain towards that city would be of a permanent character.

The dissolution of the association was also attributable in a great measure to difficulties growing out of the peculiar relations sustained by the Hannibal and Saint Joseph Railroad to its eastern connection, the Wabash Railroad, extending from East Hannibal, Ill., to Toledo, Ohio. This line is by virtue of its location a competitor both of the Chicago and Saint Louis lines for the business of the Missouri River points; and its eastern terminus, Toledo, from the force of the same circumstance, competes with those cities for the trade of the Missouri River points.

At the time of the formation of the Southwestern Rate Association, in September, 1877, the Saint Louis and Chicago companies were entirely in accord as to the importance of entering into no combination with the roads extending east of those cities, as to the rates which should prevail between the Missouri River points and Chicago, Saint Louis, and Hannibal, respectively. In other words, they resolved that whatever their through rates might be, the roads connecting Chicago, Saint Louis, and Hannibal with the Missouri River points must secure their full schedule rates on all through business to and from the Atlantic seaboard, as they had resolved to do from traffic merely passing over their lines from one terminus to the other. This line of policy protected them against all participation in the oft-occurring railroad wars between the trunk lines to the east.

But the situation of the Hannibal and Saint Joseph Railroad was peculiar. Its eastern terminus, Hannibal, on the Mississippi River, was not a great commercial center which could compete for trade with Saint Louis and Chicago, and thus draw traffic to the road. In this regard its situation was different from that of the Saint Louis and the Chicago roads.

The managers of the Hannibal and Saint Joseph Road declared that the interests of their road were identical with those of the Wabash Railroad, and therefore identified with the commercial interests of Toledo. This circumstance rendered it inexpedient for them to comply with the demand that they should maintain arbitrary or local rates between the Missouri River and Hannibal on through shipments to Toledo. The managers of the Hannibal and Saint Joseph Road, therefore, found it to be necessary to adjust their through rates with the Wabash Road in such manner as to protect the interests of the Toledo market, upon which they largely depended for traffic, for Toledo had become an active competitor for the trade of the Missouri River points. During the time when through rates between the Missouri River points and Toledo were withdrawn there was an entire suspension of through traffic via Hannibal, but very soon after the agreement as to through rates was made with the Wabash Company, more grain was secured than was carried by the six other roads of the association combined.

The possibility of a large diversion of trade to Toledo, in connection with the advantage of cheap transportation from that point to the Atlantic seaboard by one or more of the ever-contending railway lines, especially during the season of navigation by the way of Lake Erie and the Erie Canal to New York, has had the effect of detracting very much from the power which could otherwise have been exercised by the Chicago and the Saint Louis lines over the rates between those cities and the Missouri River points.

Another disturbing element of the Southwestern Railway-Rate Association may be mentioned, especially as it affords a striking illustration of the difficulties which environ agreements as to rates, and as to the *apportionment of traffic*. The Missouri, Kansas and Texas Railroad extends southwesterly from Hannibal, and at Fort Scott secures an all-rail line to Kansas City and the other Missouri River points. Besides, at Parsons, the Missouri, Kansas and Texas Railroad has a branch line diverging in a northwesterly direction and intersecting four of the principal railroads of Kansas. In order to secure a share of the business of Kansas, and for the purpose of retaliating upon the associated roads on account of their having entered into certain arrangements with the Saint Louis, Iron Mountain and Southern Railroad, and the New Orleans and Chicago Railway, in regard to the establishment of through-rates to the Gulf, the Missouri, Kansas and Texas Railroad cut the rates between the Missouri River points and the East. The Missouri, Kansas and Texas Railroad also entered into special contracts to carry west-bound freight at "cut rates" for several months ahead (an arrangement known among railroad men as "time contracts"). This practice the associated roads had abolished as between themselves, considering it incompatible with an agreement designed to maintain rates through an apportionment of traffic or of the earnings from traffic.

In all this long and bitter contest between the railroads, transportation

on the Missouri River exerted but little influence, the state of navigation rendering it an unimportant competitor.

The difficulty with the Missouri, Kansas and Texas Railroad, the diversion of freight from Chicago and Saint Louis to Toledo via Hannibal, and the diversion of grain to Saint Louis during the winter of 1877-'78, were the principal causes of the disruption of the Southwestern Railway-Rate Association in March, 1878.

Immediately after the disruption of the Southwestern Railway-Rate Association, the Chicago roads and their western connections entered into an association, and a war of rates ensued. Through rates were so much reduced that they became unremunerative. This produced a very marked discrimination against all local traffic, and therefore was the cause of much ill-feeling among the people residing along the lines of the respective roads.

Soon after the disruption of the association, navigation opened on the lakes and the Erie Canal. Rates by rail to all the Atlantic seaports were reduced, and the prices of grain at Chicago rose, causing a large flow of the grain traffic in that direction. These circumstances again brought the managers of the various competing lines together for the purpose of considering the advisability of entering into a new pooling scheme.

On the 4th of May, 1878, the Southwestern Railway Association was re-constructed. Under the new arrangement three divisions of the associated roads were made, viz, the Chicago Division, composed of the Chicago and Alton, the Chicago, Rock Island and Pacific, and the Chicago, Burlington and Quincy Railroads, with their necessary connections; the Saint Louis Division, composed of the Missouri Pacific and the Saint Louis, Kansas City, and Northern Railroads; and the Hannibal Division, composed of the Hannibal and Saint Joseph Railroad, in the State of Missouri, and its eastern connection, the Wabash Railroad, extending from Hannibal to Toledo, Ohio. The division of traffic under this arrangement was as follows:

	Per cent.
Chicago Division.....	45
Saint Louis Division	45
Hannibal Division.....	10

The members of the several divisions agreed among themselves as to the share of the traffic which should be allotted to each road, and the details of the entire apportionment were conducted by the commissioner at Chicago, who was in fact the executive officer in regard to all matters agreed upon with respect to the competitive traffic. This compact continued until the 12th of April, 1879, when it was formally dissolved. The dissolution was followed by one of the most severe contests ever known in the history of railroad wars.

The fall of rates is shown as follows:

Rates from Chicago to Kansas City, April 1 and 15, 1879.

	First class.	Second class.	Third class.	Fourth class.	Special.
April 1.....	.85	.70	.45	.30	.25
April 15.....	.10	.10	.5	.5	.5

Rates from Saint Louis to Kansas City, April 1 and 15, 1879.

	First class.	Second class.	Third class.	Fourth class.	Special.
April 1.....	.65	.50	.35	.25	.20
April 15*.....	.25	.20	.15	.10	.10
Do†.....	.8	.8	.5	.5	.5

* Nominally by the Missouri Pacific and the Saint Louis, Kansas City and Northern Railway.

† The Chicago and Alton Railroad made these lower rates.

Passenger rates fell from \$8.50 between Kansas City and Saint Louis to 50 cents, and from \$15.25 between Kansas City and Chicago to 50 cents

The circumstances which led to this second dissolution are of much interest, as they serve to illustrate some of the conditions surrounding and governing the railroad system of the entire country.

In the month of April, 1879, the Chicago and Alton Railroad Company completed the extension of its line from Mexico, Mo., to Kansas City, and at once demanded a share of the Saint Louis traffic with the Missouri River points. This new line crosses the Missouri River at Glasgow and the Mississippi River at Louisiana and at Saint Louis, over railroad bridges at those points.

The demand of the Alton Railroad for a share of the business of Saint Louis with the Missouri River points was acceded to by the Chicago roads, but was refused by the two Saint Louis roads, viz, the Missouri Pacific and the Saint Louis, Kansas City and Northern. Arbitration was refused by the latter roads, and the disruption of the association took place, as stated, on the 12th of April, 1879.

Subsequently, very important changes have taken place affecting the status of the Chicago and the Saint Louis roads and of the Hannibal and Saint Joseph and the Wabash Railroads, with respect to the traffic of the Missouri River points. These changes afford a striking illustration of the statements hereinafter made as to the uncertainty surrounding the maintenance of pooling arrangements, and especially of those arrangements in which the traffic pooled constitutes but a small part of the total traffic of certain of the lines entering into the arrangement.

In the latter part of April, 1879, an arrangement was effected with

the Union Trust Company of New York, trustee of the Missouri, Kansas and Texas Railway, whereby that part of its line extending from Hannibal to Moberly, a distance of 70 miles, could be used to connect the Saint Louis, Kansas City and Northern Railway with the Wabash Railway at Hannibal. Running facilities over the Missouri, Kansas and Texas Railway were secured for one year with the privilege, it was understood, of renewal for a longer term. By this contract the parties were enabled to establish a through line for passenger and freight business between Toledo and the Missouri River and between Chicago and the Missouri River. The running arrangement which the Wabash had made over the Illinois Central Railroad from Tolono, 137 miles south of Chicago, enabled it to reach the latter city.

Subsequently, in July, it was announced that the directors of the Wabash and of the Saint Louis, Kansas City and Northern Railways had agreed to consolidate the interests of the two companies and operate the united properties under one direction.

Prior to the date of the agreement made for the use of the Missouri, Kansas and Texas Railway, the Wabash connected with the Hannibal and Saint Joseph at Hannibal, and by means of that road formed a through line between Toledo and the Missouri River. But when the new arrangement took effect the Wabash diverted all the business which it could control to the route via Moberly. This action deprived the Hannibal and Saint Joseph road of a large amount of through traffic. Heretofore that road had been in position to make rates from the Missouri River to Toledo, and the Wabash accepted an agreed proportion of the through rates thus made, while as to the west-bound traffic the same rule obtained, except that the Wabash made the rates.

This new arrangement struck a sharp blow at the interests of the Chicago roads, as well as of those of the Hannibal and Saint Joseph road, as it created another competitor for the business between Chicago and the Missouri River. Hitherto this traffic had been divided between four through lines. The entrance of a fifth was an element which resulted in the constant disturbance of rates. Prior to the inauguration of this line, and while the Wabash Railroad worked in close alliance with the Hannibal and Saint Joseph, the latter was bound by contract to carry all its Missouri River traffic to or from Chicago in connection with the Chicago, Burlington and Quincy Railroad. This precluded the formation of a fifth Chicago line, of which the Hannibal and Saint Joseph should constitute a part, and shut the Wabash Railroad out from Chicago. The new arrangement was, therefore, an important acquisition to the latter company.

The results of the dissolution of the Southwestern Railway Association on the 12th of April, 1879, and the subsequent reunion of the lines under an arrangement designed to meet the requirements of the changes which had taken place in their relations to each other, are described as follows,

by Mr. J. W. Midgley, secretary of the association, under date of October 25, 1879:*

1. The Southwestern Railway Association was dissolved April 12, 1879.
2. Rates were immediately reduced to lower figures than had ever been known to railroads in the West. These rates, on the business carried up to September 12, a period of five months, entailed an actual loss in revenue of about \$2,000,000. These results, however, did not represent the entire loss, because, in the heat of the contest contracts were made giving special rates which run beyond the date of the restoration of harmonious relations between the parties.
3. A war of rates between railroads, like one between other parties, is inevitably attended with serious loss. Revenue is sacrificed without any apparent concern. That creates deficiencies, which have to be made up in some way. This is usually done by drawing upon the profits received from local business, i. e., business which is not competitive. Remunerative rates on local business are maintained, and the people who are removed from the scene of conflict are obliged to pay double or treble the prices for transportation which fall to those who are within the fighting territory.
4. Since the dissolution of the Southwestern Railway Rate Association the Wabash Railway, and Saint Louis, Kansas City and Northern Railway have consolidated, and will doubtless hereafter be operated as one railway. The consolidation was ratified by the stockholders of both roads during the first week of the present month. During the later months of the association the Missouri Pacific and the Wabash Railways were mainly controlled by the same parties. Commodore Garrison was president of the two roads. But a few weeks after the dissolution the commodore resigned the presidency of the Wabash, after which the interests of the two roads did not remain identical. No other changes in management or control have yet been made public. The changed conditions surrounding the roads are not yet clearly defused, and attempts to indicate them would be purely speculative.
5. The reorganization of the Southwestern Railway Rate Association took effect on and dates from September 15, 1879.
6. The agreement is a renewal of that which existed when the association dissolved, with the following exceptions:
 - (a) The Chicago and Alton is admitted as a member of the Saint Louis Division equally with the Saint Louis, Kansas City and Northern, and the Missouri Pacific Railways, and the Wabash line via Hannibal, and the Missouri, Kansas and Texas Railways are admitted as members of the Hannibal Division.
 - (b) The allotments of tonnage are to the Chicago Division and the Saint Louis Division, each 44½ per cent.; to the Hannibal Division, 11 per cent. This is 1 per cent. more to the Hannibal Division than it formerly received, which addition is taken equally from the other two divisions.
 - (c) The revenue derived from freight carried in excess of the allotments is divided in gross among the divisions that are short in proportion to their deficiencies. Under the former agreement, 40 per cent. was retained for operating expenses.
 - (d) One other new feature has been introduced. In the event of any controversy arising, resort is to be had to arbitration, and a sure method of securing arbitrators is embodied in the agreement.
7. The duration of the agreement is not fixed. Any member can withdraw on giving ninety days' notice.
8. The administrative features of the association are precisely the same as those indicated in my report to you made one year ago, in which the details of the Southwestern association were fully described.

The foregoing description of the pooling arrangements which have existed between the Chicago and the Saint Louis Railroads for the divis-

* Since this date important changes have taken place, affecting the ownership of the Toledo and Saint Louis railroads.

ion of the traffic of the Missouri River points serves to illustrate the commercial situation of that section of the country embracing Western Missouri, the southern part of Minnesota, the States of Kansas and Colorado, the Territory of New Mexico, the Indian Territory, and the northwestern portion of the State of Texas.

THE RAILROAD TRAFFIC OF COLORADO AND NEW MEXICO.

A statement in regard to the competition between the cities of Chicago and Saint Louis, and between railroads tributary to those cities, for the traffic of the Missouri River points, would be incomplete without a distinct reference to the growing commerce of Colorado and New Mexico, a considerable part of which commerce is carried on through these points. Until the latter part of the year 1877, the east-bound traffic of Colorado was almost exclusively over the Kansas-Pacific and the Atchison, Topeka and Santa Fé Railroads, and consequently almost all of it came to or passed through Kansas City, Leavenworth, Atchison, or Saint Joseph, the four Missouri River points.

The Denver Pacific Railroad, which connects Denver with Cheyenne on the Union Pacific Railroad, was controlled at that time by the Kansas Pacific Railroad Company, and the Denver and Rio Grande Railroad maintained a neutral position in regard to rates towards the Kansas Pacific and the Atchison, Topeka and Santa Fé Railroads. This enabled the two roads last mentioned to control the Colorado traffic. No difficulty was encountered in arriving at an agreement as to a division of the traffic or as to the maintenance of rates. In February, 1877, the two roads agreed to divide the gross earnings from freight and passengers (embracing both through and local traffic) upon the basis of the earnings of the two roads during the year ended February 28, 1877, which were as follows :

Kansas Pacific, \$2,784,836, or 53.49 per cent.; Atchison, Topeka and Santa Fé, \$2,421,361, or 46.51 per cent.

But in the course of a few months the situation was entirely changed. In November, 1877, the Union Pacific Railroad Company completed a branch road from a point near Cheyenne to a point on the Colorado Central Railroad—a road extending from Denver westward to the mining towns of Central City, Black Hawk, and Georgetown. Competition was at once begun for the traffic of these towns and of Denver. The Union Pacific, however, succeeded in securing an exclusive agreement as to through rates with the Colorado Central, and the Kansas Pacific road was thereby placed at a great disadvantage with respect to the traffic of all towns west of Denver. Early the next spring, the so-called Iowa pool lines and the railroads forming the Southwestern Railway-Rate Association to the Missouri River points were drawn into the contest. In April, 1878, merchandise was carried from Chicago to Denver, a distance of 1,200 miles, for 10 cents per 100 pounds; a rate much below the cost of transporting it. Subsequently, the Union Pacific Rail-

road gained an important advantage by forming a close alliance with the Denver and Rio Grande road. This resulted from the antagonism which had sprung up between the latter road and the Atchison, Topeka and Santa Fé Railroad. While the "war of rates" was going on between the Union Pacific Railroad and its eastern connections to Chicago on the one side, and the Kansas Pacific and the Atchison, Topeka and Santa Fé Railroad Companies, and their eastern connections from the Missouri River points on the other side, an effort was being made before Congress by the Kansas Pacific Railroad Company (then in a state of bankruptcy), through its receiver, to compel the Union Pacific Railroad Company to prorate on freights from Cheyenne via Denver, in order that a share of the traffic of Utah, Nevada, and the Pacific coast might be secured by the former road.

Pending action upon this question, the management of the Union Pacific Railroad secured control of the Kansas Pacific Railroad by the purchase of a sufficient amount of its depreciated securities. The case which had been submitted for the action of Congress was therefore withdrawn. Thus the Union Pacific Railroad Company, through ownership in the Kansas Pacific Railroad, and through an alliance formed with the Denver and Rio Grande Company (whose interests, for reasons which will now be stated, had become directly hostile to those of the Atchison, Topeka and Santa Fé Railroad Company), secured the control of the entire traffic of Northern Colorado.

So long as the managers of the Atchison, Topeka and Santa Fé Railroad Company manifested no intention of extending their lines westward or southward towards New Mexico, the arrangements entered into with the Denver and Rio Grande Company worked harmoniously, but when such southern and western extensions were commenced, a contest sprang up for the securing of the right of way through certain passes. The Denver and Rio Grande then entered into an agreement with the Union Pacific as to through business with the Union Pacific, throwing its entire east-bound traffic either over that road or the Kansas Pacific. The Union Pacific management thus secured entire control of the traffic of Northern Colorado as far south as El Moro.

By an instrument executed January 1, 1878, it was agreed that the gross earnings from all passenger and freight traffic passing over the Union Pacific, the Kansas Pacific, and the Colorado Central Railroads, and over the Omaha Bridge, should, for the period of fifty years, be pooled in the following proportions:

	Per cent.
To the Union Pacific Railroad	73
To the Omaha Bridge	3
To the Colorado Central Railroad	5
To the Kansas Pacific Railroad	19

The Atchison, Topeka and Santa Fé Railroad Company having gained possession of certain passes leading into New Mexico and towards Leadville, Colo., the Denver and Rio Grande Railroad Company was induced,

in October, 1878, to lease their road to the former company. This gave the Atchison, Topeka and Santa Fé Railroad Company access not only to Denver and to the mining region known as the "Leadville district," but also gave it exclusive control over the trade of Southern Colorado and New Mexico. An agreement was, however, entered into with the Union Pacific and the Kansas Pacific Railroad Companies for the pooling of all traffic arriving at or passing through Denver.

In June, 1879, the Denver and Rio Grande Railroad Company again obtained control of their road on a writ issued out of a State court. This action was, however, set aside by order of the United States district court, and the road has since been in the hands of a receiver, pending the legal adjustment of the rights of the parties. It is stated that this road is now (November 1, 1879) operated independently or with sole regard to its own interests, and not especially in the interest of either the Santa Fé Railroad Company or of the Union Pacific Railroad Company.

The commerce of that vast and rapidly developing territory west of the Mississippi and Missouri Rivers is entirely dependent for transportation upon railroads. Not only has the course of its commerce been radically changed during the last two years by the acts of rival railroad companies, but the relation existing between the companies has greatly changed, as the result of the influx of population, and of the development of the immense agricultural resources of the State of Kansas, and of the agricultural and mineral resources of Southern Colorado. A tide of emigration is also setting towards New Mexico as a result of that remarkable enterprise, the construction of the Southern Branch of the Atchison, Topeka and Santa Fé Railroad from La Junta via Las Vegas, into that Territory. Such an apportionment of traffic as that agreed upon only two years ago between the Kansas Pacific and the Atchison, Topeka and Santa Fé Railroads, embracing the passenger and freight traffic, both through and local, of the two roads, would now be impossible in consequence of the large development of both the local and the independent terminal traffic of the two roads. The interests of this road are gradually being separated from those of the more northern lines as the work of construction is pushed towards the Rio Grande and towards the proposed junction with the Southern Pacific Railroad, now in course of construction eastward from Fort Yuma.

The traffic of Southern Colorado and New Mexico, and that part of the east-bound trans-continental traffic over the Southern Pacific, which will be secured by the Atchison, Topeka and Santa Fe Railroad, will naturally reach the Missouri River points and be competed for by the rival roads extending to Chicago, to Saint Louis, and to Toledo. There will also be an active competition between the cities of Chicago and Saint Louis, as well as between the great cities of the Atlantic seaboard, for the trade of this rapidly developing section of the country, by means of the establishment of through rates and direct transportation over connecting roads.

7. DIRECT TRADE BETWEEN INTERIOR POINTS IN THE UNITED STATES AND FOREIGN COUNTRIES.

Direct trade between interior points in the United States and foreign countries, owes its development directly to the combinations which have been formed between railroad and steamship companies for the shipment of freight over two or more lines, without the necessity of any supervision on the part of the shipper between the point of shipment and the point of delivery. The establishment of telegraphic communication between trade centers, the general dissemination of the market news, and the growth of the system of issuing through bills of lading as the security of drafts drawn on foreign consignees, have also exerted an important influence upon the development of direct commercial transactions between distant points. The principal economies effected by the establishment of direct trade between interior points in the United States and ports in Europe are the saving of the expenses connected with warehousing and handling at the Atlantic seaports, and the saving of commissions, insurance, weighing, and the profits of intermediate traders. There are, however, obvious limits to the possibilities of this direct foreign trade between interior points and ports in Europe. The quantity of western produce shipped to the Atlantic seaports for consumption at those points and for shipment thence to home markets greatly exceeds that of such commodities exported to foreign countries.

The market value of these products at the seaports being determined by both the domestic and the foreign demand, a very large proportion of the products of the West which reach the foreign consumer will always be shipped first to the markets of the Atlantic seaports, at which ports is offered the option of either a home or a foreign market. The market value of western agricultural products at the Atlantic seaports is, of course, adjusted to these conditions, the efforts of the seaboard merchant being always exerted towards controlling as large a proportion as possible of the exports of such products.

Of the entire shipments of grain and flour from Chicago, the chief grain market of the West, during the year 1878, 9.39 per cent. was shipped directly to countries in Europe.

The differences between the cost of direct transportation from interior points to Europe and the cost of shipment to the markets of the Atlantic seaports, and thence to Europe, is very small. It has been found that an intermediate charge exceeding $2\frac{1}{2}$ cents per bushel on grain at the seaports will divert it from shipment to those ports, and cause its direct shipment *through* them on its way to foreign markets.

It has also been found that whenever the rate for the transportation of grain from points west of Chicago to one of the Atlantic seaports becomes less than the rate from such western point to Chicago and thence to the seaports, including all the charges at Chicago, a diversion takes

place from the Chicago market to a direct movement to the Atlantic seaports. Thus the facilities for direct shipment, cheap transportation, and the general diffusion of commercial information, exert a regulating influence over terminal charges both at interior centers of trade and at the Atlantic seaports. This has led to important economies in the modes of handling merchandise at almost all the chief centers of trade.

The tendency of the facilities for direct trade between distant points is to promote active competition between commercial cities, and to secure to each city that share of the general commerce of the country to which it is entitled by virtue of its geographical position, its capital, and the intelligence with which its commercial operations are conducted.

Direct shipments of grain and other Western products from interior points to Europe are in almost all cases made upon foreign orders.

The direct trade between interior points in the United States and foreign countries, thus far, has been confined chiefly to trade with the countries of Europe, through the ports of Boston, New York, Philadelphia, and Baltimore. To a limited extent shipments have been made direct from Saint Louis to ports in Europe by way of New Orleans.

The statistics of our foreign commerce supply no information in regard to the history of the exportation of the products of the West to foreign countries, from the fact that such exports do not come under the supervision of officers of the customs until they reach the seaboard, consequently they are reported to this bureau only as exports from seaports. The only available information in regard to direct exports from interior points is that which is furnished by trade bodies at a few of the more important cities of the interior. Facts in regard to the growth of the direct exportation of western products from Chicago and Saint Louis are hereafter presented in connection with the subject of direct trade between those cities and foreign countries. The facts in regard to the exportation of western products from Saint Louis have been furnished by Mr. George H. Morgan, secretary of the Saint Louis Merchants' Exchange, and the facts in regard to direct exports from Chicago by Mr. Charles Randolph, secretary of the Chicago Board of Trade.

Prior to the act of March 2, 1831, the importation of foreign merchandise was confined by law to seaports, to ports on the lower Mississippi River, and to ports on the great lakes engaged in carrying on trade with Canada. Under the provisions of that act, goods, wares, and merchandise imported from any foreign country were allowed to be transported to Pittsburgh, Wheeling, Cincinnati, Louisville, Saint Louis, Nashville, and Natchez, under the following conditions: "The importer was required to deposit in the custody of the surveyor of the port a schedule of the goods so intended to be imported, with an estimate of their cost at the place of exportation, whereupon the surveyor was required to make an estimate of the amount of duties accruing on the same, and the importer or consignee was required to give bond, with sufficient sureties, to be approved by the surveyor, in double the amount of the

duties so estimated, conditioned for the payment of the duties on such merchandise. The surveyor was required forthwith to notify the collector at New Orleans of the same by forwarding to him a copy of said bond and schedule." The act of 1831 also authorized "the importer or his agent to enter at New Orleans any merchandise imported as above stated by the way of that port, in the manner therein prescribed. Thereupon the collector was required to grant a permit for the landing thereof, and to cause the duties to be ascertained as in other cases, the goods remaining in the custody of the collector until reshipped for the place of destination. By the act of August 6, 1846, goods were allowed to be withdrawn from any warehouse at the seaboard, and to be transported to any other port of entry in bond.

The provisions of these acts were, however, made more general by the act of March 6, 1854, by which act it was provided that all goods, wares, and merchandise duly imported and entered for warehousing might be withdrawn from bond without payment of duty, in any collection district in the United States, and be deposited in warehouse, whether at an interior or exterior port, in any other collection district and rewarehoused thereat; and the same act provided that any such goods, wares, and merchandise might be transported wholly by land or wholly by water, or partly by land and partly by water, over such routes as the Secretary of the Treasury might prescribe. The growth of the direct import trade, between interior ports and foreign countries, was gradual in its development, and, until a comparatively recent period, was encumbered by restrictions and hinderances connected with the appraisement of merchandise at the exterior ports.

But the rapidly increasing commercial importance of the great cities of the West, and the possibilities of direct trade afforded by combinations entered into between railroad companies and steamship lines, pointed to the propriety of offering to the interior ports facilities for a less restricted intercourse with foreign countries. Accordingly the act of July 14, 1870, was passed, under the provisions of which goods may be imported at interior ports without appraisement at the exterior port where such goods are first landed.

The seaports and lake ports through which foreign merchandise may be shipped to ports of destination in the interior and to ports on the seaboard, under the provisions of the act of July 14, 1870, are Portland, Me., Boston, New York, Philadelphia, Baltimore, New Orleans, Rochester, Port Huron, Toledo, Detroit, and San Francisco.

The ports of destination to which goods may be transported from such exterior ports named above, under the provisions of the act of July 14, 1870, are Portland, Me., Boston, Providence, New York, Philadelphia, Baltimore, Norfolk, Charleston, Savannah, Mobile, New Orleans, Rochester, Buffalo, Cleveland, Toledo, Detroit, Chicago, Milwaukee, Saint Paul, Pittsburgh, Cincinnati, Louisville, Evansville, Saint Louis, Memphis, San Francisco, and Portland, Oreg.

It is to be observed that the act of July 14, 1870, not only permits the shipment of goods from seaports and lake ports to the several ports of the interior, but also the shipment of such imported merchandise from certain seaports to other seaports, the latter being termed *interior* with respect to the exterior ports, where the goods are first landed, or cross the border from Canada. The requirements of the act of July 14, 1870, and of the acts amendatory thereof, in reference to the direct importation of foreign goods at interior ports, without appraisement at the exterior ports at which they are first landed, are as follows:

First. A penal bond of at least double the value of the goods, with the estimated duties added, is required to be given at the exterior port.

Second. The importation of all classes of merchandise is permitted except wine, distilled spirits, perishable and explosive articles, and articles in bulk.

Third. Merchandise must be conveyed in cars, vessels, or vehicles securely fastened with locks or seals, under the exclusive control of officers of the customs.

Fourth. Common carriers engaging in this traffic are required to give security by bond to the United States in a penalty of not less than \$100,000, with at least two sureties, conditioned for a faithful compliance with the laws of the United States and the regulations made in pursuance thereof.

Fifth. Only those common carriers are designated who have exclusive direction and control over suitable and sufficient cars or other vehicles for the transportation of such merchandise to the port of final destination, and no vehicles or modes of conveyance are allowed to be employed for this purpose except steamboats making regular trips between the port of first arrival and the port of final destination, and railroad freight-cars. This requirement of course limits the traffic to "through" or "fast freight-line cars," and on the Mississippi River to steamboats running from New Orleans to ports above that city on the Mississippi and Ohio Rivers.

The value of the direct imports of merchandise at interior cities under the act of July 14, 1870, is still quite small in comparison with the value of the imports of foreign goods into the United States at the great Atlantic seaports, especially the city of New York. The merchants of the seaboard ports are still able to control the principal part of the importations into the country.

There was a falling-off in the value of the direct imports of foreign merchandise at interior ports without appraisement at exterior ports, from \$9,354,352, in 1873, to \$8,822,612, in 1879. The value of direct imports of merchandise at the principal interior ports, viz, Chicago, Cincinnati, Saint Louis, Louisville, and Memphis, from which foreign merchandise imported through the Atlantic ports and New Orleans is distributed, as shown by the following table, amounted during the fiscal year ended June 30, 1878, to only \$6,709,417 or 1.5 per cent. of the total imports of merchandise into the United States.

Statement showing the value of imported merchandise received at the following interior ports, through seaports, both of merchandise unappraised at exterior ports and that appraised at exterior ports, and transported under the warehouse regulations, during the year ended June 30, 1878.

Interior ports.	Received without appraisement from exterior ports.	Received from other districts under the warehouse regulations.	Total.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Chicago, Ill.....	2,608,618	309,795	3,008,413
Cincinnati, Ohio.....	632,544	83,260	715,804
Saint Louis, Mo.....	944,871	1,903,315	2,848,186
Louisville, Ky.....	74,927	20,879	95,806
Memphis, Tenn.....	36,526	9,682	46,208
Total.....	4,382,486	2,526,931	6,909,417

The following table shows the total value of merchandise imported each year from 1873 to 1878 at interior ports, without appraisement at the exterior ports where such merchandise was first landed :

Statement showing the value of foreign merchandise imported at interior ports without appraisement at exterior ports, under the act of July 14, 1870, from 1873 to 1878.

Year ended June 30—	Baltimore, Md.	Boston, Mass.	Buffalo, N. Y.	Chicago, Ill.	Cincinnati, Ohio.	Cleveland, Ohio.	Detroit, Mich.	Evansville, Ind.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1873		125,092	58,782	3,139,571	606,514	186,669	196,977	221
1874		142,981	105,656	1,950,161	583,464	167,061	202,819	3,435
1875	7,176	254,024	106,217	2,721,903	566,989	144,558	158,750	136
1876	1,943	353,156	112,395	3,065,492	571,013	121,255	162,013	1,103
1877	13,388	218,530	64,250	2,229,319	465,912	100,398	96,381	338
1878	79,380	231,701	89,312	2,693,618	632,544	86,183	58,583	293

Year ended June 30—	Genesee, N. Y.	Louisville, Ky.	Memphis Tenn.	Toledo, Ohio.	Milwaukee, Wia.	Saint Paul, Minn.	New Orleans, La.	New York, N. Y.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1873		86,034	23,794	15,865	76,532			37,890
1874		97,935	40,225	8,520	252,458			65,934
1875		94,493	16,299	6,010	107,015			48,867
1876	8,060	82,863	33,841	11,240	107,077			5,106
1877	79,352	75,456	22,119	9,667	79,724	6,230	5,036	45,824
1878	164,446	74,927	36,526	10,030	81,931	14,929		258,481

Statement showing the value of foreign merchandise imported at interior ports without appraisement at exterior ports, &c.—Continued.

Year ending June 30—	Philadel- phia, Pa.	Pitts- burgh, Pa.	Portland, Me.	Provi- dence, R.I.	San Fran- cisco, Cal.	Saint Lou- is, Mo.	Total.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1873.....	2,866,568	47,411	.....	176,364	542,288	1,167,600	9,354,352
1874.....	1,073,842	77,086	.....	132,330	800,473	922,837	6,635,667
1875.....	561,966	64,811	.....	186,087	2,018,720	881,912	7,945,913
1876.....	606,223	87,420	791	305,724	2,370,516	826,552	8,833,892
1877.....	602,344	67,277	278	263,766	2,195,863	733,614	7,875,006
1878.....	637,137	73,846	.....	249,636	1,466,487	944,871	7,879,971

From this table it appears that importations under this act fell from \$9,354,352 during the year 1873 to \$7,879,971 during the year 1878. There was a decrease of such imports at both the cities of Chicago and Saint Louis, the two principal ports engaged in this branch of trade.

The following table presents in the order of magnitude the principal and other commodities imported at interior ports, without appraisement at the port where first landed, during the year ended June 30, 1878:

Value of commodities imported at interior ports of the United States, without appraisement at the exterior ports where first landed, during the year ended June 30, 1878.

Commodities.	Values.
Wool, sheep's, and hair of the alpaca, goat and other like animals, &c.....	\$1,844,540
Cotton, manufactures of.....	967,227
Tobacco, and manufactures of.....	827,684
Flax, and manufactures of.....	475,968
Silk, manufactures of.....	447,822
Fancy goods.....	378,350
Iron and steel, and manufactures of.....	355,100
Earthen, stone, and China ware.....	326,291
Tin, manufactures of.....	232,192
Chemicals, drugs, dyes, and medicines, not elsewhere specified.....	186,756
Fruits of all kinds, including nuts.....	159,461
Leather, and manufactures of.....	155,972
Brown sugar.....	154,069
Soda, and salts of.....	125,721
Musical instruments.....	106,779
Buttons of all kinds, including button materials, exclusively, &c.....	97,678
Glass and glass ware.....	94,244
Books, pamphlets, engravings, and other publications, not elsewhere specified.....	76,141
Furs and dressed fur-skins.....	58,119
Clothing.....	56,720
Seeds.....	52,148
Wood, manufactures of.....	46,700
Salt.....	44,180
Metals, metal compositions, and manufactures of, not elsewhere specified.....	41,640
Perfumery and cosmetics.....	25,727
Hides and skins, other than furs.....	22,591
Coffee.....	21,940
Precious stones.....	20,380
All other commodities.....	478,751
Total.....	7,879,971

The exterior ports at which foreign merchandise was received under the act of July 14, 1870, for transportation without appraisement to interior ports during the year ended June 30, 1878, and the value of such imports, are shown in the following table:

Statement showing the value of merchandise imported through exterior ports for transportation, without appraisement, to interior ports, under the act of July 14, 1870, during each year ended June 30, from 1873 to 1878, inclusive.

Year ended June 30—	Baltimore.	Boston and Charles town.	Huron.	New Orleans.	New York.	Philadelphia.	Portland and Fal- month.	San Francisco.	Total.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
1873 ...	208, 753	1, 216, 900	.....	657, 071	7, 513, 825	17, 225	28, 532	.....	9, 642, 306
1874 ...	190, 877	778, 291	715	414, 246	5, 012, 034	341, 149	.....	.....	6, 737, 312
1875 ...	207, 569	411, 939	.....	402, 719	5, 915, 485	1, 024, 003	.....	9, 869	7, 971, 584
1876 ...	732, 992	382, 342	.....	337, 115	6, 527, 551	1, 087, 415	.....	54, 725	9, 122, 140
1877 ...	219, 077	704, 587	9, 004	82, 975	5, 504, 772	664, 244	.....	33, 685	7, 218, 344
1878 ...	70, 460	548, 092	10, 819	487, 478	5, 596, 992	805, 754	.....	264, 014	7, 783, 609

The value of merchandise imported into ports (other than seaports) permitted to import merchandise directly from foreign countries through exterior ports, under the act of July 14, 1870, during the year ended June 30, 1878, is shown as follows:

Interior ports.	Value.
Buffalo.....	\$89, 312
Chicago.....	2, 693, 618
Cincinnati.....	632, 544
Cuyahoga.....	86, 183
Detroit.....	53, 583
Evansville.....	293
Rochester.....	164, 446
Louisville.....	74, 927
Memphis.....	36, 526
Toledo.....	10, 630
Milwaukee.....	81, 831
Saint Paul.....	14, 929
Pittsburgh.....	73, 846
Saint Louis.....	944, 871
	4, 957, 039

It appears from this table that the total value of the imports, under the act of July 14, 1870, at the interior ports named, amounted during the fiscal year ended June 30, 1878, to the inconsiderable sum of \$4,957,039, constituting but about one per cent. of the total imports into the United States.

The subject of direct importation at interior ports has been here presented with some degree of particularity on account of the possibilities which it embraces, rather than from the fact that it is now, or ever has been, a commercial movement of any very considerable magnitude. Nevertheless, public sentiment in this country is strongly in favor of affording the greatest possible facilities for the direct importation of merchandise at interior points, compatible with the proper protection of the revenue from customs. The fact is generally recognized that the customs service should, in this regard, be so conducted as to facilitate the importation of merchandise at interior ports and, in no case, unnecessarily to clog the wheels of commerce.

The estimation in which the privileges of direct importation at interior points is held by western merchants is believed to be expressed in the following statement by Mr. George H. Morgan, secretary of the Merchants' Exchange of Saint Louis:

"The system has gained steadily in favor with the mercantile community. It has been attacked many times by powerful enemies, but the smoothness with which it has worked, the faithfulness and efficiency shown by the customs officers at the larger ports of the interior, and the very remarkable *absence* of that loss and irregularity which it was predicted would follow its adoption, have all tended to strengthen its hold upon the business public, and insure its continuance as a feature in the business life of the country."

The direct exportation of merchandise from interior points to foreign countries has had a much more rapid growth, and constitutes at the present time a commercial movement of very much greater importance than the direct importation of merchandise from foreign countries at interior points. The direct exports from Saint Louis have, since the year 1873, exhibited a very rapid increase, both by the way of New Orleans and by the way of Atlantic sea-ports; whereas the value of the direct imports (*i. e.*, all imported goods which passed through the custom-house) at Saint Louis fell from \$4,820,499 in 1873 to \$2,848,186 during the year 1878.

The direct exports from Chicago increased from 132,474 tons in 1873 to 602,018 tons in 1878. The value of the direct exports from that city to Europe, during the year 1878, amounted to \$46,000,000.

Discriminations incidental to direct foreign trade at interior ports.

The direct importation of commodities at interior points from Europe, and the direct exportation of commodities to Europe from interior points in the United States, have at various times given rise to an active competition between rival trunk lines. This contest is confined mainly to the Grand Trunk Railway, the New York Central Railroad, the Erie Railway, the Pennsylvania Railroad, and the Baltimore and Ohio Railroad. The sharpness of this struggle has been due mainly to the fact that the available freight-space on west-bound steamers and on west-bound cars

largely exceeds the amount of freight which can be secured in that direction. At one time the rates from Liverpool to Chicago were less than the rates from New York to Chicago. Such rates of course discriminated very injuriously against the commercial interests of the four principal Atlantic seaports, Boston, New York, Philadelphia, and Baltimore. The commercial interests of New York were much more affected thereby than were those of the other cities, from the fact that the trade of New York throughout the Western and Northwestern States greatly exceeds that of the other three cities combined. If these discriminations against the Atlantic seaports had continued they would undoubtedly have deflected a very large amount of trade from the Atlantic seaports to a direct trade between interior points and points in Europe. This would have been the case especially with respect to commodities of low value in proportion to bulk and weight.

As yet, no provision of law has been made for the direct importation without appraisement of foreign merchandise at interior points west of Saint Louis and Chicago, no adequate demand having yet arisen for the establishment of such facilities. The cities of Chicago and Saint Louis being the two principal interior points from which merchandise is exported direct to foreign countries, and at which merchandise is imported direct from foreign countries, the facts connected with such traffic at those cities demand special notice.

DIRECT TRADE BETWEEN CHICAGO AND FOREIGN COUNTRIES.

Exports.

There is no record of the time when the direct exportation of western products from Chicago to Europe began. Prior to the year 1865 very considerable purchases of western products were made on orders from Europe, and it is stated that to some extent western shippers exported grain and provisions to Europe on their own account. Such shipments, however, consisted mainly of goods consigned to some seaboard city, and shipped thence to their destination in Europe, arrangements being made for the ocean transportation on the arrival of the property at the seaboard, through subconsignees at those points. In the year 1856, during the Crimean war, large quantities of wheat and flour were purchased in Chicago on direct orders from both England and France. These orders were generally filled by shippers via New York or Montreal. Shipments were made from Chicago by lake and Erie Canal to New York City, or by lake and Canadian Canal route to Montreal, as at that time it was supposed to be impracticable to transport grain from Chicago to New York by rail with profit in competition with the lake and canal route, and it was not until nearly ten years later that grain was transported by all rail lines from Chicago to the seaboard. When navigation closed on the lakes during the winter of 1856-'57, direct shipments were, to a limited extent, made from Chicago to Europe via Cairo, Ill., and New Orleans. The plan of direct shipments from Chicago to Europe in vessels loaded at that port passing through the Canadian canals, and

thence to Europe, has at times been strongly advocated, but this method of direct trade between lake ports and Europe has never yet met with any degree of success. Aside from the important question as to the safety of employing vessels upon the ocean, which in their construction are adapted to lake and canal navigation, it is found that freights cannot be transported across the ocean as cheaply in vessels of the limited size required by the dimensions of the Canadian canals as in the larger vessels usually employed upon the ocean.

During the last three years ended June 30, the clearances of vessels from lake ports to ports in Europe have been as follows: Three in 1877, none in 1878, and three in 1879. This method of direct trade between lake ports and Europe may, therefore, be regarded as practically abandoned. The opinion is, however, entertained in some quarters that this method of direct trade between lake ports of the United States and Europe will be revived upon the completion of the enlargement of the Canadian canals; a work now in progress.

The railroads which, in combination with ocean-steamer lines, are now engaged in direct trade between Chicago and Europe are the Michigan Central; Lake Shore and Michigan Southern; Pittsburgh, Fort Wayne and Chicago; Great Western, of Canada; Canada Southern; Grand Trunk; New York Central; Boston and Albany; New York, Lake Erie and Western; Pennsylvania; and Baltimore and Ohio. In carrying on this through-traffic the eastern trunk railroads enter into combinations with each other and with steamship lines. To a limited extent, grain shipped from Chicago to Europe on through bills of lading is transported across the ocean in sailing vessels.

The quantity of the various classes of western products shipped direct from Chicago to Europe from 1865 to 1878, inclusive, is shown as follows:

Shipments to Europe, on through bills of lading issued in the city of Chicago, from 1865 to 1878, inclusive.

[Compiled by Charles Randolph, esq., secretary of the Chicago Board of Trade.]

Year.	Flour.	Wheat.	Corn.	Other grains.	Provisions.	Miscellaneous freights.		Total.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Packages.</i>	<i>Packages.</i>	<i>Tons.</i>	<i>Tons.</i>
1865.....						30,948		8,912
1866.....						8,380		1,904
1867.....						22,958		4,619
1868.....						19,880		4,576
1869.....	44,004	5,220			9,968	930		7,213
1870.....	90,353	84,519			24,186	391		17,921
1871.....	32,031	131,960			58,770	3,087		21,081
1872.....	16,293	268,617	388,970		230,543	8,856		77,953
1873.....	131,417	1,420,948	8,600		310,296	21,269		132,474
1874.....	64,468	980,193	209,647		276,754	64,765		113,776
1875.....	79,767	2,440,713	708,979		309,059	59,594	15,385	219,387
1876.....	83,280	1,199,718	2,316,206	586,564	696,840	102,743	16,195	314,507
1877.....	74,121	1,954,687	1,620,575	187,238	640,776	522,389	1,734	309,185
1878.....	147,028	6,121,681	4,149,552	209,208	907,027	681,305	7,876	603,018

From this table it appears that there has been a rapid growth in the direct exportation of flour, grain, provisions, and miscellaneous freights from Chicago to Europe.

Under the head of "Provisions" in the foregoing table, are included only pork and beef products. Under the head of "Miscellaneous freight" are included butter, cheese, tallow, hides, leather, seeds, oil, alcohol, &c. The principal part of these shipments was made from Chicago by rail, although flour and grain have been forwarded to some extent by lake. During the year 1878, the shipments of flour, wheat, corn, and provisions, and the total tonnage of all direct exports of western products from Chicago to Europe very greatly exceeded such exports during any previous year. The direct exportation of flour increased from 44,004 barrels in 1869 to 147,028 barrels in 1878. The direct exportation of wheat increased from 5,220 bushels in 1869 to 6,121,681 bushels in 1878. The direct exportation of corn increased from 388,970 bushels in 1872 to 4,149,552 bushels in 1878; and the direct exportation of provisions increased from 9,968 packages in 1869 to 907,027 packages in 1878. The total tonnage of direct exports from Chicago to Europe amounted to only 8,912 tons in 1865, and to only 17,921 tons in 1870, but increased to 602,018 tons in 1878. The total value of these direct exports during the year 1878 amounted to about \$35,600,000. It is estimated by the secretary of the Chicago Board of Trade that the value of the direct shipments to Europe through subconsignees at the Atlantic seaports amounted to about 30 per cent. of the foregoing amount. It would thus appear that the total value of direct exports of western produce from Chicago to Europe during the year 1878, amounted to about \$46,000,000. Of the total shipments of grain and of flour reduced to grain from Chicago during the year 1878, amounting to 118,675,469 bushels, it appears that 11,142,067 bushels, or 9.39 per cent. was shipped directly to Europe.

The foregoing facts indicate that the direct shipment of western products from Chicago to Europe is rapidly becoming one of the most important commercial movements of the country.

For the purpose of cultivating the foreign trade in beef and hog products, the method of cutting and curing these products at Chicago, for exportation, has been accommodated to the habits and tastes of the people of Great Britain and of the countries of continental Europe. In various other ways the merchants and manufacturers of Chicago are seeking to avail themselves of the advantages of foreign markets. The proportion of the direct exports to Europe from Chicago, shipped from that city by lake and by rail during the year 1878, is shown, as follows:

How shipped from Chicago.	Total tons.
By lake	82, 396
By Michigan Central Railroad	167, 935
By Lake Shore and Michigan Southern Railway	137, 019
By Pittsburgh, Fort Wayne and Chicago Railway	175, 351
By Pittsburgh, Cincinnati and Saint Louis Railway	27, 338
By Baltimore and Ohio Railroad	11, 969
Total	602, 018

From this statement it appears that during the year 1878 about 13.7 per cent. of the direct exports from Chicago to Europe were shipped by lake, and about 86.3 per cent. by rail.

The direct importation of foreign merchandise at Chicago.

The statistics of direct imports at Chicago, under the act of July 14, 1870, cannot be presented for the years prior to the fiscal year ending June 30, 1873. Under the provisions of that act, as before stated, foreign merchandise was allowed to be imported at interior points, without appraisement, at the seaports through which such goods passed on the way to their destination.

Railroad iron and other heavy freights were shipped directly from Europe to Chicago as early as the year 1852, but such shipments were consigned to mercantile houses at New York, where the customs entries were made and the duties paid. The goods were then forwarded to Chicago through the agency of these houses. Imports into Chicago from foreign countries may be divided into three classes:

First. Imports directly from Canada by rail and lake.

Second. Imports through the seaports of the United States, under the general warehouse laws and regulations, by the provisions of which goods are appraised, the duties thereon ascertained and secured at the seaport, but paid at the interior port.

Third. Imports through seaports of the United States, under the act of July 14, 1870, by the provisions of which act goods are forwarded in sealed cars, under bond, without the delay of appraisement at the exterior port.

The values of the imports of these three classes are shown in the following table, for the years 1871 to 1878, inclusive:

Fiscal year ended June 30—	Received by lake and rail from or through Canada.	Received in bond from other districts under warehousing acts.	Received without appraisement under the act of July 14, 1870.	Total.
	Dollars.	Dollars.	Dollars.	Dollars.
1871.....	575, 154	1, 467, 345	No data.	No data.
1872.....	953, 111	1, 635, 627	No data.	No data.
1873.....	1, 658, 625	746, 059	3, 139, 571	5, 544, 255
1874.....	808, 517	282, 597	1, 959, 161	3, 050, 275
1875.....	561, 549	178, 237	2, 721, 903	3, 461, 689
1876.....	521, 537	498, 261	3, 065, 492	4, 085, 290
1877.....	327, 420	656, 701	2, 229, 319	3, 213, 440
1878.....	399, 920	309, 795	2, 693, 618	3, 403, 333

It is proper to state that the above table comprises mainly dutiable goods. Aside from tea and coffee, the imports of free goods are very small in value.

The value of the direct imports at Chicago, by lake, from or through Canada, fell from \$1,658,625 in 1873 to \$399,920 in 1878; the value of the direct imports in bond through other districts, under warehousing acts, fell from \$746,059 in 1873 to \$309,795 in 1878, and the value of the direct imports, without appraisement at exterior ports, under the act of July 14, 1870, fell from \$3,139,571 in 1873 to 2,693,618 in 1878. Of the total value of imported merchandise entered at the Chicago custom-house during the year ended June 30, 1878, it appears that 11.75 per cent. was received through or from Canada, 9.10 per cent. in bond from other districts under warehousing acts, and 79.15 per cent. under the act of July 14, 1870.

It is impossible to ascertain, even approximately, what proportion the value of the imports into Chicago, which are entered at the custom house at that point, bears to the total value of imported goods purchased by Chicago merchants at the Atlantic seaports.

Messrs. Field, Leiter & Co., the largest dry-goods dealers in Chicago, say :

We have no figures to make correct estimates, but do not believe over 10 to 12½ per cent. of the foreign dry goods sold here is imported directly. Our importations have been falling off, and our business increasing. What are not imported directly are purchased in Eastern cities.

Mr. Charles Randolph, in forwarding the above statement made by Messrs. Field, Leiter & Co., says :

In other lines, I think the percentage is almost uniformly less. So that probably, on the whole, 5 to 7 per cent. would be quite large enough for a general estimate, and if foreign sugar, refined in this country, be included as imported goods, the percentage would be still less.

The following statement shows the amount of tea and coffee imported by Chicago merchants, directly from foreign countries, during the last five years :

IMPORTATIONS OF TEA AND COFFEE AT CHICAGO DIRECTLY FROM
FOREIGN COUNTRIES (DUTY-FREE).

The following statement, compiled by Messrs. Moseback & Humphrey, commission merchants and brokers in tea and coffee, No. 42 Wabash avenue, shows the amount of direct importations of tea and coffee by Chicago merchants during the past five years.

This statement embraces only such shipments as were consigned directly to Chicago from foreign ports, and does not include consignments to Chicago merchants from points in this country or in Canada, nor the importations by Chicago merchants disposed of without reaching that city.

Importations of tea.

Mode of shipment.	Japan.	Greens.	Oolongs. and Souchong.	Total.
Steamer via San Francisco	60,554	18,432	4,945	83,931
Total half-chests, 1878	60,554	18,432	4,945	83,931
Total half-chests, 1877	43,507	20,873	6,356	70,736
Total half-chests, 1876	43,917	19,654	7,421	70,992
Total half-chests, 1875	27,343	17,339	1,225	45,907
Total half-chests, 1874	25,170	7,350	.....	32,520

Importations of coffee.

Mode of shipment.	Rio.	Santos.	Java.	Ceylon.	Singapore.
	<i>Bags.</i>	<i>Bags.</i>	<i>Mats.</i>	<i>Cwts.</i>	<i>Mats.</i>
Steamers	32,648	6,429	.....	.....	.....
Sailing-vessels	14,011	2,636	8,020	.....	.....
Total, 1878	46,659	9,065	8,020	.....	.....
Total, 1877	48,340	3,066	10,010	.....	.....
Total, 1876	32,545	3,873	6,007	2,350	1,189
Total, 1875	40,211	7,827	5,199	1,400	.....
Total, 1874	22,666	.....	.....	4,745	.....

NOTE.—But little if any of this tea and coffee was entered at the custom-house in Chicago, and therefore these articles do not appear in the table of imports at Chicago hereinbefore given. Being free of duty, these articles were entered for consumption at the seaports where they first arrived, and were shipped thence to the interior port of destination without the supervision of the customs officers.

As yet there have been no direct imports at Chicago from Europe via New Orleans and the Mississippi River. Coffee, cigars, and tropical fruits have been imported in small quantities at Chicago from Cuba, South America, Central America, and Mexico, via New Orleans and Mobile.

The relative values of the direct imports and direct foreign exports from Chicago during the year 1878 are shown as follows:

Value of direct foreign shipments (estimated)	\$46,000,000
Value of direct imports*	3,403,333

SAINT LOUIS.

DIRECT TRADE BETWEEN SAINT LOUIS AND FOREIGN COUNTRIES—

Exports.

Merchandise is exported directly from Saint Louis to foreign countries through the port of New Orleans, and through the principal Atlantic seaports. Southern shipments are made exclusively by the way of the Mississippi River, and consist almost entirely of flour and grain in bulk.

* All imported merchandise which passed through the Chicago custom-house.

To some extent provisions have also been exported direct to foreign countries by this route.

The eastern shipments to foreign countries are made exclusively by rail through the ports of New York, Boston, Philadelphia, and Baltimore.

The increase of direct exports of grain from Saint Louis to foreign countries during the last nine years is indicated by the following table, nearly the entire amount being for direct shipment to foreign countries from New Orleans:

Statement showing the shipments of bulk grain from Saint Louis New Orleans—1870 to 1878, inclusive.

Year.	Wheat.	Corn.	Rye.	Oats.	Totals.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1870	66,000				66,000
1871		309,077		3,000	312,077
1872		1,711,039			1,711,039
1873		1,373,969			1,373,969
1874	365,252	1,047,794		10,000	1,423,046
1875	135,961	172,617			308,578
1876	37,142	1,737,237			1,774,379
1877	351,453	3,578,057	171,843		4,101,353
1878	1,876,639	2,857,056	609,041	108,867	5,451,603

Shipments from Saint Louis to foreign ports via New Orleans are not generally made on through bills of lading. Such shipments are usually made on orders from Europe, the vessels engaged in carrying such merchandise being sent by the parties ordering the goods to New Orleans for cargo. Orders are also sent to New Orleans merchants who purchase the goods at Saint Louis, whence they are shipped to New Orleans for account of the foreign purchaser.

This trade has been greatly crippled during the present year (1879) by the quarantine regulations at New Orleans which went into effect on the 1st of May, all vessels touching at any of the West India Islands being detained in quarantine twenty days. As vessels bound from ports in Europe to New Orleans generally touch at the West India Islands for the purpose of landing a part of their cargoes, such quarantine regulations operated very injuriously to the commercial interests of New Orleans. The result is that vessels are sent to Baltimore and other Atlantic seaports for cargoes. Thus the direct export trade of Saint Louis has been to a considerable extent diverted to the rail and ocean-steamer routes via Atlantic seaports.

The quantity of the direct exports from Saint Louis to each foreign port during the year 1878, which was shipped by rail, to Atlantic seaports, is shown in the following table:

Foreign shipments by rail from Saint Louis during 1878.

To—	Cotton.	Tobacco.	Flour.	Meats.	Lard.	Tallow and grease.	Wheat.
	<i>Bales.</i>	<i>Hhds.</i>	<i>Bbls.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Bush.</i>
Liverpool, England.....	121, 148	4, 107	96, 966	2, 493, 740	581, 130	227, 740	11, 266
London, England.....		1, 341	16, 387	76, 875		10, 060	
Hull, England.....			400				
Beth, England.....			1, 540				
Bristol, England.....		415	105	109, 600		223, 135	
W. Hartlepool, England.....			500				
Havre, France.....	4, 257		115	200, 347			
Paris, France.....			500				
Glasgow, Scotland.....		203	67, 348	4, 500	33, 000		
Leith, Scotland.....		171	1, 500				
Londonderry, Ireland.....			1, 224				
Belfast, Ireland.....			25, 223				4, 922
Dublin, Ireland.....			800				
Bremen, Germany.....	1, 055	52	10	253, 436	29, 700		
Stuttgart, Germany.....				50, 525	33, 000		
Hamburg, Germany.....	1, 510	77		101, 000			
Onthaven, Germany.....				1, 435			
Mannheim, Germany.....				271, 036			
Genoa, Italy.....	1, 201						
Antwerp, Belgium.....	550	831	13, 845	2, 597, 645	330, 000		
Rotterdam, Holland.....			1, 700	92, 665	33, 000		
Amsterdam, Holland.....			585				
Other European ports.....				315, 307			
Rio de Janeiro, Brazil.....			27, 300				
North American ports.....		126	9, 190	695, 854			
To New York for export....	100	26	700	1, 649, 711			
Total.....	129, 821	7, 349	265, 968	8, 613, 706	1, 039, 830	460, 935	16, 188

In addition to the above list of principal articles there was, exported to various European ports, a considerable amount of miscellaneous merchandise.

Foreign shipments through Atlantic seaports are, with very few exceptions, made on through bills of lading, drafts being drawn against such shipments directly upon the foreign purchaser. Almost all of this class of exports is sold *delivered at destination*, the shipper at Saint Louis being obliged to make his own freight contracts. Mr. George H. Morgan, secretary of the Merchants' Exchange of Saint Louis, says:

The exportation of commodities directly, via Atlantic seaports, has for this reason proved remunerative, and I am of opinion that the business of 1879 will show a large increase in our foreign trade. In fact, there is no doubt of it.

The following table shows the increase in the direct exports from Saint Louis by rail, via Atlantic seaports, since the year 1875, and the increase of such exports by Mississippi River, via New Orleans:

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Foreign shipments from Saint Louis by rail, via Atlantic seaports.

To—	1878.	1875.	To—	1878.	1875.
	<i>Tons.</i>	<i>Tons.</i>		<i>Tons.</i>	<i>Tons.</i>
England.....	50,740	15,107	Holland.....	335	
Scotland.....	6,935	530	Other European ports.....	70	2
Ireland.....	2,970		South American ports.....	2,730	
Germany.....	1,190	934	North American ports.....	1,395	
France.....	210	252	To New York for export.....	1,721	
Italy.....	300		Total tons.....	72,091	16,825
Belgium.....	3,495				
Via New Orleans to Europe.....				154,060	6,857
Total tons.....				226,151	23,682

The relative value of the eastern and southern direct exports during the year 1878 has been estimated as follows:

Value shipped east.....	\$10,000,000
Value shipped south.....	3,500,000

Total value of the direct foreign shipments from Saint Louis..... 13,500,000

The following table exhibits the value of the direct imports of foreign merchandise at Saint Louis, via New Orleans and via Atlantic seaports, during the years 1873 to 1878, inclusive:

Statement showing the value of merchandise imported at Saint Louis without appraisement at exterior ports, under the act of July 14, 1870; also of imported merchandise appraised at exterior ports, transported and received in bond under the general warehouse laws and regulations, for each year from 1873 to 1878.

Year ended June 30—	Received without appraisement, under act July 14, 1870.			Appraised at exterior ports and received in bond under warehouse regulation.			Recapitulation.		
	Via New Orleans.	Via Atlantic seaports.	Total.	Via New Orleans.	Via Atlantic seaports.	Total.	Total via New Orleans.	Total via Atlantic seaports.	Total imports.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1873 ..	644,147	523,543	1,167,690	3,194,472	458,337	3,652,809	3,838,619	981,880	4,820,499
1874 ..	393,159	529,786	922,945	3,123,690	47,307	3,170,997	3,516,849	577,093	4,093,942
1875 ..	382,586	499,327	881,913	2,091,148	98,033	2,189,181	2,473,734	597,360	3,071,094
1876 ..	372,966	453,596	826,562	1,926,394	23,610	1,950,204	2,299,360	477,396	2,776,756
1877 ..	100,311	631,296	731,607	1,842,792	647,179	2,489,971	1,943,103	1,278,475	3,221,578
1878 ..	445,854	499,017	944,871	1,537,415	365,900	1,903,315	1,963,269	864,917	2,848,183

It appears from the foregoing table that 70 per cent. of the direct imports of merchandise at Saint Louis during the year 1878 was received through New Orleans, and 30 per cent. through Atlantic seaports.

The total value of the direct imports of merchandise at Saint Louis fell from \$4,820,499 during the year 1873 to \$2,848,186 during the year 1878, a decrease of 41 per cent.

It is estimated by Mr. George H. Morgan, secretary of the Saint Louis Merchants' Exchange, from information furnished to him by merchants largely engaged in the sale of foreign merchandise at Saint Louis, that during the year 1878 only from 5 per cent. to 10 per cent. of the total value of the foreign merchandise sold at Saint Louis was imported directly from foreign countries, the remainder, constituting from 90 to 95 per cent., having been purchased at seaports, very much the larger percentage having been purchased at Atlantic seaports, and chiefly at New York.

The following statement shows the value of merchandise imported at Saint Louis without appraisement at exterior ports, under the act July 14, 1870, during the year ended June 30, 1878:

Order.	Commodities.	Value.
		<i>Dollars.</i>
1	Sugar, brown	154, 069
2	Tin, in plates	138, 983
3	Wool, manufactures of	96, 567
4	Earthen, stone, and china ware	94, 566
5	Chemicals, drugs, dyes, and medicines	77, 947
6	Cotton, manufactures of	74, 839
7	Iron and steel, manufactures of	55, 434
8	Tobacco, and manufactures of	41, 890
9	Flax, manufactures of	37, 384
10	Books, pamphlets, engravings, and other publications	19, 830
11	Jute, and other grasses, manufactures of	19, 754
12	Bolting cloths	19, 675
13	Fancy goods, including perfumery	18, 074
14	Salt	10, 502
15	Silk, manufactures of	8, 917
16	Metal, metal compositions, and manufactures of, not elsewhere specified	6, 734
17	Seeds	4, 970
18	Leather, manufactures of	4, 654
19	Oils	3, 676
20	Paintings, chromo-lithographs, photographs, and stationery	2, 720
21	Musical instruments	2, 312
22	Paints	2, 087
23	Papier-maché, and other manufactures of paper	2, 067
24	Precious stones	1, 606
25	Wood, manufactures of	1, 077
26	All other articles	45, 637
	Total	944, 871

8.—THE COMMERCE OF THE CITIES OF SAINT LOUIS, LOUISVILLE, AND CINCINNATI WITH THE STATES SOUTH OF THE OHIO RIVER AND SOUTH OF THE STATE OF MISSOURI.

The States here referred to are Kentucky, Tennessee, Northern Georgia, Alabama, Mississippi, Louisiana, Arkansas, and Texas. Twenty-five years ago the main surplus product of these States was almost exclusively marketed at Mobile, New Orleans, and Galveston, and the trade interests of those cities controlled the supplying of general merchandise within the States mentioned. The city of New Orleans also furnished an important part of the general merchandise required in the States of Ohio, Indiana, Illinois, Missouri, Iowa, and Wisconsin. But in the course of the development of the Western and Northwestern States, important changes have taken place.

The most important trade current of the present day is that between the West and the seaboard, a commerce carried on chiefly by rail, and in all its habits conformed to the methods and necessities of railway transportation. This great east and west trade current has naturally drawn to itself a very large part of the trade of the States south of the Ohio River and south of the State of Missouri. Thus a large part of the area of the commercial operations of the Gulf ports has been invaded by the trade interests of Saint Louis, Louisville, and Cincinnati.

Chicago and other cities of the Western and Northwestern States, the Atlantic seaboard cities, and Memphis, Vicksburgh, and other southern cities, also compete for the trade of the section referred to, but that trade is mainly dominated by Saint Louis, Louisville, and Cincinnati at the North, and by Mobile, New Orleans, and Galveston at the South.

The changes in the course of the southern commerce, here referred to, have resulted mainly from the construction of railroads throughout the Southern States above mentioned, the main trunk lines of which are directly tributary to the commercial interests of Saint Louis, Louisville, and Cincinnati. The city of Cincinnati has heretofore been placed greatly at a disadvantage with respect to this trade, in consequence of a lack of direct railroad communication with the South, but that need is now fully supplied by the Cincinnati Southern Railroad, a work undertaken and carried to completion through the enterprise of that city in its corporate capacity.

In the competition for the trade of the States situated south of the Ohio River and south of the State of Missouri, it is impossible to state with any degree of accuracy the relative commercial power of the three Gulf cities, Mobile, New Orleans, and Galveston, and of the three interior cities, Saint Louis, Louisville, and Cincinnati, as there are no available statistics showing the amount of capital invested in commercial enterprises, or the value of the commerce of the several cities. For

practical purposes, however, the relative amount of trade of the three Gulf cities and of the three interior cities may be inferred from their population, and from the specific facts in regard to the limits of southern trade which have been furnished, in reply to inquiries made by the Chief of the Bureau of Statistics, by Mr. George H. Morgan, secretary of the Saint Louis Merchants' Exchange, Mr. C. H. Pope, of Louisville, Ky., and Mr. Sidney D. Maxwell, superintendent of the Cincinnati Chamber of Commerce.

The population of Saint Louis, Louisville, and Cincinnati, according to the latest available information, is stated to be as follows:

	Population.
Saint Louis (year 1878)	500,000
Louisville (year 1878)	125,000
Cincinnati (year 1878)	281,860

Total 906,860

The population of Mobile, New Orleans, and Galveston, according to the latest information, is stated to be as follows:

	Population.
Mobile (year 1876)	38,499
New Orleans (year 1875)	203,439
Galveston	30,000

Total 271,938

Saint Louis, Louisville, and Cincinnati are not only large commercial cities, but they are also largely engaged in manufacturing enterprises. The commerce of these cities is, therefore, of two kinds: first, distributive commerce, consisting of the purchase of goods from abroad and the sale of such goods; and, second, commerce in articles manufactured at these cities, which has aptly been termed "productive commerce."

The value of the manufactures of Saint Louis during the year 1878 was estimated at \$100,000,000, the value of the manufactures of Louisville is estimated at \$55,000,000, and the value of the manufactures of Cincinnati, according to actual returns, was \$138,736,165.

It appears, therefore, that the total value of the manufactures of these three cities is nearly \$294,000,000.

The commerce of the cities of Mobile, New Orleans, and Galveston, is, on the other hand, almost exclusively a distributive commerce.

In the distributive commerce of Saint Louis, Louisville, and Cincinnati, the trade limits of the various commodities differs widely; but with respect to the commerce in commodities manufactured in the three cities respectively, they almost entirely dominate the trade of the States south of the Ohio River and south of the State of Missouri.

In regard to the southern trade of Saint Louis, Mr. Morgan, secretary of the Merchants' Exchange of Saint Louis, says:

The southern trade of Saint Louis embraces all that part of the State of Missouri lying south of the latitude of this city, the State of Arkansas, the western and the northwestern portion of the State of Louisiana, and a large part of the State of Texas.

The southern trade of the city east of the Mississippi River embraces a considerable portion of the States of Kentucky and Tennessee, the northwestern part of the State of Georgia, and the States of Alabama and Mississippi. Saint Louis also virtually controls the trade of the Mississippi River on both banks between Cairo and New Orleans. Our merchants have not the same hold on the trade of the Southern States east of the Mississippi that they have on the trade of the States west of that river, from the fact that east of the river they meet a sharp competition from the cities of Louisville and Cincinnati. The city of Chicago is also quite an active competitor for the trade east of the Mississippi; and the northern cities on the Atlantic seaboard also compete for this trade by means of the facilities afforded for direct shipments.

Attention is especially invited to the elaborate and able report presented by Mr. C. H. Pope, of Louisville, Ky., in regard to the southern and southwestern limits of the trade of that city, in so far as relates to the sale of various commodities (see Appendix, p. 122). With respect to molasses and raw sugar, the trade limit of New Orleans reaches Louisville; but in the sale of groceries, hats and caps, dry goods, crockery, clothing, drugs, and general merchandise, the trade of New Orleans is met and overlapped along various lines from the southern border of Kentucky even to the line of the Gulf cities. Adopting the excellent generalization presented by Mr. Pope, it may be stated that with respect to articles manufactured in Louisville, the trade of that city extends to the Gulf, but as to purely distributive commerce, the trade limits of the two cities meet and overlap. Louisville also meets the competitive trade of Memphis, Vicksburg, and other interior cities of the Southern States.

Attention is called to the valuable statement presented by Mr. Sidney D. Maxwell, superintendent of the Cincinnati Chamber of Commerce, in regard to the southern trade of that city (see Appendix, p. 172). Mr. Maxwell says:

The southern trade of Cincinnati embraces Kentucky, Tennessee, West Virginia, Louisiana, Arkansas, Northern Georgia, Alabama, Mississippi, and a part of Texas.

The nature and extent of the trade of Cincinnati with the Southern States cannot be specifically defined. In some departments this city penetrates the whole South. Her machinery, implements of husbandry, safes, wood-making machinery, furniture, provisions, liquors, clothing, boots and shoes, hardware, candles, soap, starch, carriages, and other classes of goods go to all parts of the Southern States. Her heavy dry goods are largely distributed throughout Kentucky and Tennessee, to some extent in Arkansas, and in a limited way in the northern parts of the Gulf States. The same may be said of heavy groceries and drugs, though her light groceries go farther southward, finding liberal outlets in Arkansas and Louisiana, as well as in other parts of the more remote South.

It is not possible to define this trade by metes and bounds. It varies with seasons, classes of goods, and other circumstances. Some branches of trade scarcely reach the remote South. * * *

The points where the trade of this city is confronted by the trade of New Orleans are controlled much more by classes of merchandise than by geographical considerations. In general it may be said that competition with New Orleans is little felt until the Gulf States are reached, and even there such an interlacing and overlapping are found that you cannot draw lines of demarkation. In many respects Cincinnati and New Orleans do not have business rivalries. Their interests are largely mutual. They represent latitudes and districts the products of which are widely different and constitute the most natural conditions of interchange.

While it is impossible from the information which has been procured, or from any information now available, to state with any degree of precision the exact proportion of the trade in general merchandise throughout the States south of the Ohio River and south of the State of Missouri, which is shared by the three interior cities, Saint Louis, Louisville, and Cincinnati, and by the three Gulf cities, Mobile, New Orleans, and Galveston, yet it may be stated that the trade of the three interior cities greatly exceeds in territorial extent and in amount that of the three cities on the Gulf.

The cities of Saint Louis, Louisville, and Cincinnati have, within the last ten years, been competitors of the Gulf cities for the purchase of cotton, the great surplus product of the South, and the opinion is expressed by persons who are informed as to the commercial affairs of the three former cities that their cotton trade will probably largely increase as a result of the extension of the facilities for its transshipment overland by rail.

Facts in regard to the shipment of cotton via Saint Louis, Louisville, and Cincinnati may be found in the chapter of this report relating to the cotton crop. The amount of cotton passing through these cities, and through the cities of New Orleans, Mobile, and Galveston, during the year ended August 31, 1879, was as follows:

	Bales.
Saint Louis	335, 799
Louisville	193, 725
Cincinnati	248, 069
Total	777, 593
New Orleans	1, 187, 365
Mobile	362, 408
Galveston	582, 118
Total	2, 131, 891

At the present time the value of merchandise shipped south from the cities of Saint Louis, Louisville, and Cincinnati largely exceeds the value of the receipts of merchandise from the South at those cities, balances being adjusted mainly through the trade of those cities with the Atlantic seaports—Baltimore, Philadelphia, New York, and Boston.

The trade of Saint Louis, Louisville, and Cincinnati is further indicated by the following statements as to the sources of supply of the merchandise purchased by the wholesale merchants of those cities.

9.—THE COURSE OF THE TRADE OF SAINT LOUIS, LOUISVILLE, AND CINCINNATI, AS INDICATED BY THE PURCHASE OF GENERAL MERCHANDISE BY THE WHOLESALE MERCHANTS OF THOSE CITIES.

The following information as to the points at which purchases are made by wholesale merchants of Saint Louis has been furnished to this office by Mr. George H. Morgan, secretary of the Merchants' Exchange of that city. It has been thought proper to omit mentioning here the names of the parties.

SAINT LOUIS, MO.

Statement of Messrs. ———, wholesale dealers in staple and fancy groceries.

About three-fourths of purchases are made at Atlantic seaports, and one-fourth at New Orleans. Of the total purchases at Atlantic seaports, two-thirds are made at New York. All goods are shipped directly, on through bills of lading.

Messrs. ———, wholesale dealers in staple and fancy groceries.

Three-fourths of purchases are made at Atlantic seaports, and one-fourth at New Orleans. About two-thirds of purchases at Atlantic seaports are made at New York.

Statement of Messrs. ———.—Groceries.

About 40 per cent. of purchases are made at Atlantic seaports, and 8 per cent. at New Orleans. Of total purchases at Atlantic seaports, 30 per cent. are made at New York. About 30 per cent. of purchases are made from manufacturers at New York, Brooklyn, Fairport, N. Y.; Philadelphia, Baltimore, Wheeling, Danville and Petersburg, Va.; Belair, Ohio; and Louisiana, Mo. Goods are shipped directly by rail from place of purchase.

These merchants add the following remarks to their statement:

"Twenty-five years ago the small dealer (or retailer) obtained almost every article of merchandise and most manufactured articles of trade from the wholesale jobber, who kept what might be termed a 'complete outfit.' Now the dealers in specialties, too numerous to name, reach the retailer and supply him directly. This business in the aggregate is very large, and does not figure in estimates of the wholesale trade. Coffee is the most important item as to amount of sales by the wholesale grocer, who naturally wants its cost reduced by all available means. Transportation from eastern ports adds so largely to its cost, that any improvement on the present irregular and arbitrary tariff of railroads would be welcomed. Its importation through New Orleans would save millions annually to the consumers in the Mississippi Valley."

Statement of Mr. ———, dealer in groceries, wines, and liquors.

About one-half of purchases are made from jobbing and wholesale houses, of which three-fourths are made at Atlantic seaports, and one-fourth at New Orleans. Of the purchases at Atlantic seaports, about seven-eighths are made at New York. About one-fourth of purchases are made of manufacturers at various points in this and foreign countries. All goods are shipped to us on through bills of lading.

This gentleman adds the following remarks to the foregoing statement:

"Direct importations of wines, liquors, teas, raisins, malt liquors, and fancy goods

have become quite an important feature of this business, which in the future will doubtless attain still greater proportions. The value of goods directly imported by this firm during the last year from all parts of the civilized world, would equal one-sixth to one-fifth of the entire purchases of the house. This firm has made direct importations of goods a specialty for a number of years."

Statement of ———, groceries.

Three-fourths of purchases are made at Atlantic seaports, and one-fourth at New Orleans. Of the purchases at Atlantic seaports, about one-half are made at New York. About one-half of purchases are made of manufacturers at Baltimore and Cincinnati. All goods are shipped directly from the east by rail on through bills of lading.

These gentlemen add the following remarks to the foregoing statement:

"The grocery business of Saint Louis is steadily increasing, but not in the ratio it ought to, in consequence of the unfair discriminations of the eastern trunk lines in favor of other cities, even farther away than Saint Louis from the original terminus. This city ought to be more of an importing point than it is, in consequence of its location and connection with the gulf. Manufactured goods of all kinds in the grocery line are largely on the increase, particularly those hermetically sealed in cans."

Statement of Messrs. ———, giving their purchases of coffee during the year 1878.

	Bags.
At New York.....	6,223
At Baltimore.....	4,901
At New Orleans.....	495
At Mobile.....	2,300

Total.....13,919

The following information as to the points at which purchases are made by prominent wholesale merchants of Louisville, Ky., has been furnished to this office by Mr. C. H. Pope of that city:

LOUISVILLE, KY.

Statement of Messrs. ———, dealers in China and glassware.

We make all our purchases in this country, buying some goods in New York from manufactories in Connecticut. All our purchases are made at the manufactories at Pittsburgh, Pa., Wheeling, W. Va., and Meriden, Conn. All our goods are shipped to us directly from the manufactory by rail on through bills of lading. Our foreign, English and French goods were formerly imported through New Orleans. Now we import them on through bills of lading from Liverpool to Louisville in bond, through Boston mainly, and a few through New York. The ocean freights are cheaper via Boston, the facilities for transferring from steamship to railroad are better, less expensive, and the railroad rates of freight the same as from New York.

Ten years ago it took from three to four months to land goods from Liverpool to Louisville via New Orleans, now we get them within thirty days with cheaper freights and insurance. Our glassware is nearly all made in Pittsburgh and Wheeling—where we buy direct from the manufacturers.

Statement of Messrs. ———, dealers in hardware, cutlery and guns.

Our purchases are made exclusively from manufacturers—none of them are made at New Orleans. The bulk of the goods we buy through New York offices are made in the New England States. Manufactories located in Pennsylvania, Ohio, Indiana, and



Kentucky supply about fifty per cent. of our goods. All our goods are shipped to us by rail directly from the manufactories on through bills of lading.

Twenty-five years ago we imported 75 per cent. of all the goods sold by us, and it has grown gradually less every year until now our sales are about 10 per cent. of imported goods. The West has increased rapidly in the manufacture of our goods in the last fifteen years and increasing every day. It is only a question of time that the importation of medium grades of pocket knives will cease. We do not import a gross of table knives now where twenty years ago 90 per cent. was imported.

Statement of Messrs. ———, wholesale druggists.

Most of our purchases during the year 1878 were made from manufacturers and importers or were of our own importation. Purchases at Atlantic seaports were largely of foreign goods. A small proportion were made at New Orleans. Of our purchases of foreign goods nearly one one-half were made at New York. Nearly half of our total purchases were made from factories throughout the country, mostly in Pennsylvania. Our goods are nearly always shipped to us by rail on through bills of lading.

Within the last twenty-five years many drugs and chemicals, formerly imported, are being made in this country. Foreign goods are now frequently imported by merchants of interior cities. The drug trade that formerly was conducted in small towns as merely a branch of a general store has passed very generally into the hands of druggists and apothecaries who make it their sole business to the greater security of the people, as dangerous drugs are now handled by persons who have made it their business to understand their properties and quality.

Statement of Messrs. ———, dealers in boots and shoes.

We make nearly all our purchases in Boston from manufactories located there. We buy a few rubbers in New Jersey. Nearly all our goods are shipped to us directly by rail on through bills of lading.

Within five or six years several factories have started here which, however, supply a very small proportion of the demand.

Statement of Messrs. ———, wholesale dealers in dry goods.

Our purchases are made mostly in New York from manufacturers or their agents. We make no purchases in New Orleans. About nine-tenths of the purchases made at Atlantic seaports are made at New York. All our goods are shipped to us direct by rail on through bills of lading.

The tendency of the wholesale trade has been towards concentration in fewer hands, and the business is done on closer margins than formerly. Since the war heavy sheetings and coarse cotton goods generally are purchased almost exclusively from manufacturers South—in Georgia, Alabama, and North and South Carolina.

Statement of Messrs. ———, dealers in general groceries.

During the year 1878 about 83 per cent. of our purchases were made at Atlantic seaports, and about 5 per cent. at New Orleans. Of those made at Atlantic seaports about 50 per cent. were made at New York. Including sugar refineries under manufactories, about 5 per cent. of our purchases in 1878 were made from manufactories in Boston, 8 per cent. in Philadelphia, 2 per cent. in Buffalo, and 10 per cent.—wooden ware, &c.—in interior towns. All our goods are shipped to us from the east directly by rail on through bills of lading.

Purchases at New Orleans are less than they were twenty-five years ago, but more than they were ten years ago, and are increasing. All our raw sugars and a considerable portion of our clarified come from New Orleans.

Statement of Messrs. ———, dealers in clothing.

During the year 1878 about three-fourths of our purchases of merchandise were made from jobbing or wholesale houses at Atlantic seaports; none at New Orleans. We manufacture a portion of the goods we sell, and about one-fourth of our purchases are made in Kentucky. Of our total purchases at the East, about one-third are made in New York, and two-thirds in New Jersey. About three-fourths of our purchases were made from manufacturers in New York and New Jersey. All our goods are shipped to us direct by rail on through bills of lading.

Twenty-five years ago the business was very small in Louisville, and but very little was manufactured here. The business has increased until it is now at least twenty-five times as large as then. Our business covers about ten of the Southern and Southwestern States. As an estimate we would say that the sales of ready made clothing from wholesale houses in this town aggregate one and a half million dollars.

Statement of Messrs. ———, dealers in hats, caps, and fur goods.

All our purchases during the year 1878 were made from jobbing or wholesale houses at Atlantic seaports, and nearly all at New York, as the manufacturers have agents in New York. Purchases were made from manufactories located at Reading, Pa., Newark, N. J., and at other places in Pennsylvania and Massachusetts. Our goods are shipped to us directly by rail from New York City on through bills of lading.

During the war much of the trade in Southern Indiana and Illinois was diverted from Louisville, but it has since to a large extent been recovered. Northern Texas is now also partially supplied from this town, whereas we had no trade from there before the war. Except Northern Texas, the territory supplied or partially supplied from this town has probably not been extended; but the amount of business done has considerably increased.

Statement of Messrs. ———, dealers in coffee, sugar, and molasses.

During the year 1878, about nineteen-twentieths of our purchases of coffee were made at Atlantic seaports, and one-twentieth at New Orleans. Of those made at Atlantic ports about fifteen-twentieths were made at New York, two-twentieths at Philadelphia, and two-twentieths at Baltimore.

During the year 1878, about nine-tenths of our total purchases of sugar were made at Atlantic seaports and one-tenth at New Orleans. Of molasses (including sirups), about five-tenths at Atlantic seaports and five-tenths at New Orleans. Of the sugar purchased at Atlantic seaports, about eight-tenths at New York, one-tenth at Philadelphia, none at Baltimore. Of the molasses (including sirups), at Atlantic seaports, about five-tenths, at New York; none at Philadelphia, and none at Baltimore.

Statement of Messrs. ———, dealers in sugar and molasses.

During the year 1878 about one-half of our purchases of sugar and molasses were made at Atlantic seaports and one-half at New Orleans. Of those made at Atlantic ports, about one-sixth were made at New York, one-sixth at Philadelphia, and one-sixth at Boston.

Twenty-five years ago nearly all our sugar and molasses came from the South (except cut loaf); now nearly all raw sugar and molasses come from New Orleans, and most of the refined sugars and sirups from the East. Some refined sugars, however, come from New Orleans.

Statement of Messrs. ———, dealers in coffee.

During the year 1878, about three-fourths of our purchases of coffee were made at Atlantic seaports, and about one-fourth at New Orleans and other gulf ports. Of those made at Atlantic seaports, about three-fourths were made at New York, and one-fourth at Baltimore; very little was purchased at Philadelphia.

Twenty-five years ago, nearly all the coffee used here was purchased at New Orleans, and a small quantity at Baltimore and New York; and this continued, with slightly increasing purchases from Atlantic ports, until the beginning of the civil war, when the trade shifted entirely to Atlantic ports, and so continued during the war. When the war ended, the coffee trade again commenced with the Gulf ports, and has gradually increased at the ports of New Orleans, Mobile, and Savannah, and, as above stated, we now receive about one-fourth of our supplies from that direction.

Mr. Pope adds the following observations in regard to the trade of Louisville in drugs, in coffee, and in sugar:

DRUGS.

In interviewing the principal wholesale druggists here, I learn that their business necessitates the keeping of a very great variety of goods, in order to fully meet the wants of the country or general merchant. As a consequence, their supplies come from a great many sources.

Imported goods are largely purchased in New York, even by our largest dealers, who now import less than formerly.

Goods of domestic manufacture are mostly bought directly from the manufacturers throughout the country, to a large extent in Pennsylvania, and to a considerable extent in Ohio and other States. A member of the firm of R. A. Robinson & Co. told me that a list of the names and location of the factories from which they make their purchases would fill many pages, as they numbered hundreds.

COFFEE.

Coffee is brought here almost entirely through brokers, who sometimes represent the importers, but oftener, perhaps, heavy jobbers who purchase by the cargo, and whose headquarters are for the most part in New York. Such importer or jobber, on receipt of a cargo at any port, sends samples to brokers at the various distributing centers, and from these samples the wholesale dealer usually makes his purchases. The two houses specially interviewed, Torbitt & Castleman, and Moore, Bremaker & Co., are among the largest dealers in this specialty here, and the proportions given by each are undoubtedly correct as regards the business of each. Taking the business of the city as a whole, I infer, as the result of conversations with a considerable number of merchants, that the average would be between the proportions given by the two, but nearer those of Torbitt & Castleman.

SUGARS.

Of all the sugars used here, I estimate that about one-fourth, or a little less, comes from New Orleans, and the remainder mostly from Boston, New York, and Philadelphia. The business of one or two merchants in this line can hardly be taken as representing the aggregate business of the city as to the relative quantities purchased from different sections; as one merchant may make a specialty of one kind, and another of another kind. Nearly all raw sugars come from New Orleans; refined sugars and syrups mostly from the East.

CINCINNATI.

No specific data have been received from merchants of Cincinnati similar to those furnished by merchants of Saint Louis and Louisville. The principal part of the purchases of the wholesale business houses of Cincinnati is made at the Atlantic seaports, mainly at New York, only a small proportion being made at New Orleans, the latter consisting chiefly of unrefined sugar, molasses, and rice. This is indicated by the

following statement made by Mr. Sidney D. Maxwell, superintendent of the Cincinnati Chamber of Commerce.

Of the sugar, 50 per cent. is purchased at New Orleans or shipped directly from the plantations to this city, to which there appears a growing tendency. Of the remainder, 60 per cent. is bought in New York, and the residue is divided between Philadelphia and Boston, the former doing the larger trade with Cincinnati. Of coffee, fully 90 per cent. is purchased at Atlantic seaports. The remainder of the trade is divided almost equally between New Orleans and Mobile. Of the purchases of coffee made last year, 90 per cent. was made at New York, and the remainder at Baltimore, Philadelphia, and Boston, the largest share being made at Baltimore. Dry-goods, boots and shoes, hats and caps, silk and millinery goods, drugs, hardware, crockery, glassware, and merchandise generally of this class, are not purchased at all in New Orleans. Neither are they purchased by our large dealers from the jobbers and wholesale houses of the eastern seaports, but from the manufacturers or their agents.

A considerable amount of crockery is now manufactured in Cincinnati, and we have a large and rapidly-growing business in the manufacture of boots and shoes. The manufactures both of hardware and glassware are also important here, while with respect to the former it is estimated that one-half of all now sold in this city is produced west of the Allegheny Mountains. The clothing trade of Cincinnati is supplied by her own manufacturers. In 1878 they produced goods, the aggregate value of which, in men's and boys' wear, was \$9,462,700. As each year this country is producing more of what she consumes and is sending great supplies abroad, so is Cincinnati each year manufacturing more of what she sells, thus laying the broadest foundations for her future growth and prosperity. Merchandise of all kinds is almost wholly shipped on through bills of lading.

The following is a summary statement in regard to the purchases of the principal commodities and classes of commodities made by the merchants of Saint Louis, Louisville, and Cincinnati, at Atlantic seaports and at New Orleans, and other gulf ports:

Staple and fancy groceries.—About three-fourths of the purchases made at Atlantic seaports—chiefly New York—and one-fourth at New Orleans.

Coffee.—About 90 per cent. of the purchases made at Atlantic seaports—chiefly New York—and 10 per cent. at New Orleans and other gulf ports.

Drugs.—Purchases chiefly made at Atlantic seaports,—a very small proportion at New Orleans.

Boots and shoes.—Almost all purchases made at Atlantic seaports—chiefly at Boston.

Clothing.—Purchases made at Atlantic seaports and at other points in the northern and western States. A large amount of clothing is manufactured at Cincinnati. No purchases of clothing are made at New Orleans.

Hats, caps, and fur goods.—Almost all purchases made at Atlantic seaports—chiefly at New York.

The foregoing facts in regard to the trade of Saint Louis, Louisville, and Cincinnati indicate that the wholesale merchants of those cities purchase the principal part of the classes of merchandise above mentioned at Atlantic seaports, such merchandise being largely distributed by them to purchasers throughout the States situated south of the Ohio River and south of the State of Missouri.

The information furnished also serves to illustrate the magnitude and importance of the arrangements which had been entered into between railroad companies for the transportation of goods on through bills of lading. Through such facilities, all the trunk lines connecting the western cities with the cities of the Atlantic seaboard have become competitors of each other. Through the same facilities, the commercial interests of the cities of Boston, New York, Philadelphia, and Baltimore compete actively for the trade of the cities of the west, and in this trade they also compete with New Orleans and other gulf ports with respect to certain classes of imported goods.

10.—THE UNITED STATES AND CANADIAN TRANSIT TRADE.

The navigation laws of the United States forbid the transportation of merchandise from one American port to another American port in foreign vessels. This provision of law applies as well to Canadian vessels employed on the great lakes as to vessels belonging to foreign nations engaged in commerce upon the ocean. But while Canadian vessels are not allowed to trade between American ports on the lakes, the railroads of Canada which form connections between different points in the United States, are not subject to such restrictions in their traffic interests. Freight may be transported across the Dominion of Canada in the cars of such roads, from one point to another in the United States, without the payment of duty, and subject only to such regulations as appear to be necessary in order to protect the customs revenues of the two countries.

There are also certain transportation lines in the United States over which merchandise may be transported between-seaports of the United States and the Dominion of Canada, and between different points in the Dominion of Canada, under reciprocal conditions as to exemption from the payment of customs duties, and as to regulations having for their object the protection of the customs revenues of the two countries.

This reciprocity of transportation facilities constitutes what is commonly known as *the United States and Canadian transit trade*.

The "transit trade" is the subject of treaty relations between the Governments of Great Britain and the United States. The ports from which and to which, and the routes over which, the merchandise may be transported under these reciprocal relations of traffic, are set forth in the regulations of the Treasury Department of the United States. The following are the routes for the transportation of merchandise through Canada from one port of the United States to another:

First. The Grand Trunk Railroad from Port Huron, in Michigan, to Buffalo, Niagara Falls, Ogdensburgh, N. Y., Saint Albans, Vt., and Island Pond, near the northern boundary of the State of Vermont.

Second. The Great Western Railroad of Canada, from Detroit and Port Huron to Suspension Bridge and Buffalo.

Third. The Canada Southern Railroad from Trenton, a point near the city of Detroit, to Buffalo, N. Y.

Fourth. The Saint Lawrence River and the Canadian canals, under the conditions imposed by our navigation laws.

The prescribed routes for the transportation of Canadian merchandise across the territory of the United States are :

First. The railroad-lines extending from Portland and Boston to Canada.

Second. The rail and water lines from the city of New York to the Dominion of Canada.

Third. The overland route from ports on Lakes Michigan and Superior to the British province of Manitoba.

Fourth. The rail-line from the province of New Brunswick, across the States of Maine, New Hampshire, and Vermont, to the Canadian boundary line near Island Pond.

These routes are delineated on map No. 1 at the end of this report.

Thus far the reciprocity of transportation facilities has been in a high degree beneficial to both countries. The question as to which country has realized the greater advantages from the arrangement is not, therefore, one of practical moment. Commercial intercourse has been stimulated and the railroads of both countries have realized great advantages from the additional traffic secured.

The railroads in the Dominion of Canada which enjoy the privileges of the transit trade compete freely with the principal trunk railroad lines of the United States. The most important of these competing lines is the Grand Trunk Railway. This road, by means of its eastern and western connections, is a direct competitor of all the railroads in this country which engage in traffic between the New England States and the Western and Northwestern States, and of all the railroads engaged in the transportation of commodities from the Western States to Europe, and from Europe to those States. The manner in which this competition was carried on for several years led to serious difficulties in the adjustment of freight rates between the Atlantic seaports and points in the Western and Northwestern States.

Under the privileges of the transit trade, the competition of the Grand Trunk Railway appears to be the result mainly of the force of circumstances rather than of any voluntary and unconstrained line of policy pursued by its management. The rates which may be charged for the transportation of almost the entire traffic of that road on both local and through freight, are governed by the competition of the lake and Canadian canal route. This applies not only to the traffic between the western termini of that road and the port of Montreal, but also to traffic carried between its western termini and the ports of Portland and Boston, in so far as such traffic relates to commodities intended for exportation to Europe, since the rates which may be obtained on all east-bound traffic of this description are necessarily regulated also by the rates

which prevail on the lakes and Canadian canals, in connection with the ocean rates which prevail between Montreal and Europe. Besides, the managers of the Grand Trunk Railway have found by experience that in order to participate in the west-bound traffic between Portland and Boston and the Western States, their rates must be somewhat lower than those which prevail on the shorter and more expeditious lines in the United States. In the course of the efforts made by the managers of the Grand Trunk Railway to maintain lower rates, several severe wars of rates have occurred. At such times the rates between Boston and western points have fallen very much below those in force between New York city and points at the West. This operated very prejudicially to the commercial interests of New York City, and of course produced loud complaints.

It has only been within the last two years, under the pooling arrangements effected with respect to west-bound traffic, and more recently, in a certain degree, with respect to east-bound traffic, that the differences between the Grand Trunk Railway and the lines of this country have been adjusted, and the stability of rates secured.

The low through rates which have prevailed for the transportation of merchandise between the Atlantic seaports and the Western and North-western States appear, therefore, to a considerable extent, to have been the result of the force of the circumstances surrounding and controlling the conduct of the freight traffic of the Grand Trunk Railway, by virtue of the advantages which it enjoys, under the privileges of the "transit trade," of competing with railroads in this country for the traffic between the Eastern and the Western States.

Statistics showing the quantity and value of the commodities shipped in the transit trade have been annually published since 1870. The following statement, compiled from the annual report of this office on foreign commerce, shows the value of commodities shipped between the dominion of Canada and foreign countries, or from one part of the dominion to another across the territory of the United States:

Year ended June 30—	Value of commodities.	Year ended June 30—	Value of commodities.
1870.....	\$23,452,330	1875.....	\$47,842,872
1871.....	25,956,544	1876.....	47,010,559
1872.....	32,976,296	1877.....	31,446,373
1873.....	40,178,877	1878.....	25,115,809
1874.....	41,474,429		

No plan has yet been adopted for the collection of statistics showing either the quantity or the value of commodities shipped through the territory of Canada by citizens of the United States, owing to the fact that it is deemed to be a part of our internal or domestic commerce, and that the Government of the United States has heretofore adopted no measures for collecting information upon this subject. This traffic greatly exceeds the value of commodities shipped by the people of Canada through the territory of the United States.

The intimate connection between the transportation lines of Canada and of the United States has tended very greatly to increase commer-

cial intercourse between the two countries, and it appears to be a matter of great importance that this trade should be fostered by every practicable expedient.

11.—THE COMPARATIVE GROWTH OF COMMERCE ON THE LAKES, AND ON THE TRUNK RAILROADS CONNECTING THE CITY OF CHICAGO WITH THE ATLANTIC SEABOARD.

The effects of competition between transportation on the lakes and on the great trunk lines are very clearly illustrated by the commercial movements at Chicago. It is estimated that about 92 per cent. of the freights shipped east from Chicago by lake consists of breadstuffs. Of the total shipments east from Chicago during the year 1878, there were 1,979,004 tons shipped by lake, and 2,883,381 tons shipped by rail. The proportion of the principal articles shipped east from Chicago by the trunk railway lines during the year 1878, is shown as follows:

The principal and other articles shipped East from Chicago by the main trunk railways during the year 1878.

Articles.	Tons.	Per cent.
Animals and their products	1, 187, 662	40. 2
Grain, flour, seeds, and feed	1, 233, 491	42. 8
Lumber, shingles, laths, &c	78, 015	2. 5
Alcohol, high wines, &c	18, 609	. 6
All other articles	400, 524	13. 9
Total by rail	2, 883, 381	100. 0

The data from which the foregoing table was compiled will be found in Appendix No. 84.

It appears that 42.8 per cent. of all the freight shipped by rail from Chicago to the Atlantic States consisted of cereals, and that 40.2 per cent. consisted of animals and their products. Ninety-six per cent. of all the commodities shipped east from Chicago consisted of grain, flour, and feed. The proportion of grain shipped east from Chicago by lake and by rail during the year 1878 was as follows:

	Tons.
Grain shipped east by lake	1, 903, 541
Grain shipped east by rail	1, 233, 491
Total	3, 137, 032

The proportion of animals and their products shipped east by lake and by rail was:

	Tons.
Animals and their products shipped east by lake	35, 765
Animals and their products shipped east by rail	1, 157, 652
Total	1, 193, 417

The proportion of all other commodities, besides animals and their products and grain, shipped by lake and by rail was as follows :

	Tons.
All other by lake.....	39,698
All other by rail.....	492,238
Total	531,936

The following tables indicate the changes which have taken place in the transportation of wheat, wheat-flour, and corn from Chicago to the east since the year 1863 :

Eastward shipments of wheat from Chicago.

Year. *	By lake.	By rail.	Total.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1863	10,846,082	49,074	10,895,156
1864	9,983,567	144,939	10,128,506
1865	6,502,575	1,147,510	7,650,085
1866	5,827,646	3,605,618	9,433,264
1867	8,492,187	1,072,078	9,564,265
1868	8,896,647	2,114,300	11,010,947
1869	11,279,514	1,758,258	13,037,772
1870	13,429,069	2,621,669	16,050,738
1871	12,120,923	576,468	12,697,391
1872	8,831,870	2,363,810	11,195,680
1873	15,528,984	8,149,209	23,678,193
1874	16,974,149	9,729,251	26,703,400
1875	16,061,054	5,956,619	22,017,673
1876	7,896,869	5,378,792	12,775,661
1877	10,845,983	2,957,250	13,803,233
1878	12,903,481	10,018,880	22,922,361

* This statement is for calendar years, except from 1863 to 1869, when the trade-year ended March 31.

The rail shipments increased from less than 1 per cent. of the total shipments in 1863 to 44 per cent. of the total shipments in 1878. In view of the fluctuations in the aggregate shipments from year to year, the general tendency of traffic may be better illustrated by comparing the shipments during the first five years with the shipments during the last five years of the period mentioned.

The lake shipments during the first and the last five years were as follows:

	Bushels.
Period of five years, 1863 to 1867	41,452,227
Period of five years, 1874 to 1878	63,681,036
Showing an increase of	22,228,809
or 53.6 per cent.	

The rail shipments of wheat during the first and the last five years were as follows:

	Bushels.
Period of five years, 1863 to 1867	6,019,219
Period of five years, 1874 to 1878	34,040,792
Showing an increase of	28,021,573

It thus appears that there was an increase from 12.7 per cent. of the total shipments during the five years, 1863 to 1867, to 34.8 per cent. of the total shipments during the five years, 1874 to 1878.

The following table furnishes data similar to the foregoing in regard to the shipment of flour from Chicago by lake and by rail:

Eastward shipments of flour from Chicago.

Year.*	By lake.	By rail.	Total.
	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>
1863	1,206,443	272,128	1,478,569
1864	1,034,808	213,479	1,248,282
1865	646,356	721,068	1,367,424
1866	481,491	1,555,776	2,037,267
1867	650,367	1,187,582	1,837,949
1868	774,556	1,749,973	2,524,529
1869	829,272	1,323,235	2,152,507
1870	574,393	989,160	1,563,553
1871	488,705	694,274	1,182,979
1872	223,457	1,023,968	1,246,425
1873	428,321	1,773,487	2,201,788
1874	555,152	1,672,037	2,227,189
1875	328,283	1,672,913	2,201,196
1876	236,591	2,309,530	2,546,121
1877	148,779	2,229,729	2,378,508
1878	321,648	2,371,623	2,693,271

* The year ended March 31 up to 1869. The calendar year is covered by the figures from 1869 to 1878, inclusive.

In 1863 the shipments of flour by lake constituted 81 per cent. of the total movement, but in 1878 only 12 per cent. The diversion of flour from the lakes to the railroads has been much more marked than that of wheat. It appears from the foregoing table that the shipments of flour from Chicago by lake during the year 1878 were only about one-fourth of the shipments by lake during the year 1863, but that the shipments by rail during the year 1878 were about eight times the shipments by rail during the year 1863. This diversion of trade from the lakes to the railroads has been more rapid during the last four or five years than ever before.

The following table furnishes similar data in regard to the shipments of corn from Chicago:

Shipments of corn east from Chicago.

Year.	By lake.	By rail.	Total.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1863	24, 749, 400	130, 197	24, 879, 597
1864	11, 903, 475	654, 809	12, 558, 284
1865	24, 421, 000	674, 053	25, 095, 053
1866	31, 457, 855	1, 452, 182	32, 910, 037
1867	19, 940, 172	1, 612, 851	21, 553, 023
1868	21, 671, 071	3, 307, 718	25, 038, 789
1869	17, 019, 940	4, 457, 420	21, 477, 360
1870	13, 508, 387	4, 018, 479	17, 526, 866
1871	34, 200, 876	2, 435, 220	36, 636, 096
1872	41, 589, 508	5, 388, 402	46, 977, 910
1873	34, 487, 205	2, 194, 361	36, 681, 566
1874	30, 242, 311	2, 364, 833	32, 607, 144
1875	21, 850, 652	4, 321, 559	26, 172, 211
1876	28, 104, 265	17, 299, 232	45, 403, 497
1877	38, 607, 611	7, 637, 511	46, 245, 122
1878	46, 368, 653	13, 504, 458	59, 873, 111

The shipments of corn by rail during the year 1878 were a hundred times as great as during the year 1863. The shipments by lake during 1878, were larger than during any previous year, being nearly twice as great as during the year 1863. The rail shipments in 1863 constituted only 5 per cent. of the eastward movement of corn, but in 1878 they constituted 22 per cent. of the eastward movement. The eastward movement of corn by rail was larger during the year 1876 than during any previous year, or during either of the two following years. The exceptionally large shipment of corn by rail during the year 1876 was in a great measure due to the demoralization of rail rates and to a competitive warfare carried on between the east and west trunk lines.

Corn being a commodity of lower value in proportion to bulk than either wheat or wheat flour, and being chiefly moved in large quantities under single consignments, the principal part of it is still shipped on the cheap water line.

As navigation on the lakes is limited to about seven months of the year, it is a matter of interest to note the quantity of wheat and corn shipped by rail during the period when navigation is open and during the period when it is closed. On page 250 of the Appendix will be found a table giving the quantity of wheat and corn shipped from Chicago by lake and by rail during each month of the years 1876, 1877, and 1878.

The average monthly shipments of wheat by rail during the five months of the years 1876, 1877, and 1878, when navigation was closed, amounted to 647,448 bushels, and the average during the seven months when navigation was open, 411,581 bushels. The average shipments of corn by

rail during the five months when navigation was closed were 1,249,078 bushels, and the average during the seven months when navigation was open 939,285 bushels.

Several steamer lines run in connection with the New York Central, the Erie, and the Philadelphia and Erie Railroads. As the economical transportation of grain on a railroad requires regularity of movement, it was found to be necessary to establish steamer-lines in order to secure suitable lake connections for the roads. A very important advance has been made in lake transportation by the employment of steamers having one or more barges in tow. The amount of tonnage thus employed is gradually increasing. The average freight-charges from Chicago to New York by the three modes of transportation are shown in the table on page 249 of the Appendix.

For several months during the years 1875 and 1876 the railroads were engaged in a war of rates, and the actual rates charged were generally much below the published rates.

12.—COMPARATIVE GROWTH OF TRAFFIC ON RAILROADS AND ON THE ERIE CANAL, IN THE COMMERCE BETWEEN THE WEST AND THE SEABOARD.

The large preponderance of the traffic on railroads over the traffic on the Erie Canal in the commerce between the West and the Atlantic seaboard is indicated in the following statement, showing the tonnage moved on the New York State canals, on the Erie Railway, on the New York Central Railroad, and on the Pennsylvania Railroad, during the years 1876, 1877, and 1878:

	1876.	1877.	1878.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
New York State canals.....	4, 172, 129	4, 955, 963	5, 171, 320
Erie Railway	5, 972, 818	6, 183, 451	6, 150, 468
New York Central Railroad.....	6, 808, 680	6, 351, 256	7, 695, 413
Pennsylvania Railroad.....	9, 922, 911	9, 238, 295	10, 946 752

The tonnage transported on the New York State canals during the year 1878 constituted only one-sixth of the total tonnage moved on the four lines mentioned. It is impossible to ascertain the tonnage moved on the Baltimore and Ohio Railroad, also an important commercial highway between the West and the seaboard. In the above statement is embraced the tonnage of the Pennsylvania Railroad and branch lines between Philadelphia and Pittsburgh. It appears from the report of that company that the total tonnage moved on all lines controlled by it, both east and west of Pittsburgh, amounted to 33,276,095 tons.

The diversion of grain and other products of the West from the lake and canal route to the various rail routes connecting the West with the seaboard constitutes one of the most important features of the internal commerce of the United States. This diversion began about fif-

teen years ago. Its extent may be inferred from the grain receipts at Portland, Boston, New York, Philadelphia, and Baltimore during the years 1876, 1877, and 1878, presented as follows :

	1876.	1877.	1878.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
New York { By canal and Hudson River.....	32, 735, 773	48, 856, 176	63, 905, 872
{ By rail.....	59, 047, 953	50, 892, 987	85, 350, 079
Portland, by rail.....	4, 000, 181	2, 738, 215	4, 925, 037
Boston, by rail.....	22, 753, 698	23, 215, 457	27, 291, 781
Philadelphia, by rail.....	36, 310, 565	25, 420, 545	45, 474, 650
Baltimore, by rail.....	35, 255, 176	35, 346, 470	47, 075, 240
Total by rail.....	157, 367, 573	137, 613, 654	210, 116, 787

From this statement it appears that of the total grain receipts, during 1878, at the seaports mentioned, 24 per cent. was transported by canal, and 76 per cent. by railroad.*

The progress of the diversion of grain and other agricultural products from the canals to the railways was quite rapid for several years prior to the year 1876, during which year about six-sevenths of the grain shipped to the seaboard was transported by rail. The year 1876, however, proved to be somewhat exceptional, from the fact that during almost the entire season of navigation a war of rates prevailed between the principal trunk lines connecting the West with the seaboard; the freight rates on the railroads being almost as low as those on the canals. The proportion of grain delivered at the seaboard by canal amounted to 17 per cent. during the year 1876, to 26 per cent. during the year 1877, and to 24 per cent. during the year 1878.

The entire receipts of grain at Boston, Philadelphia, and Baltimore, from the West, are transported directly by rail.

The following table indicates the amount of flour and grain delivered at New York, as compared with the total quantity delivered at Montreal, Portland, Boston, Philadelphia, Baltimore, and New Orleans, from 1872 to 1878, inclusive, the flour having been reduced to grain.

Year.	Delivered at New York.	Delivered at six other sea- board ports.	Total seven ports.	Per cent. at New York.	Per cent. at six other ports.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>		
1872	89, 819, 578	94, 843, 824	184, 663, 402	48. 9	51. 1
1873	92, 137, 971	96, 952, 012	189, 089, 983	48. 7	51. 3
1874	107, 273, 156	99, 479, 950	206, 753, 106	51. 8	48. 2
1875	93, 443, 488	92, 191, 266	185, 634, 754	50. 3	49. 7
1876	97, 178, 856	127, 535, 523	224, 714, 379	43. 3	56. 7
1877	103, 313, 782	116, 785, 179	220, 098, 961	46. 9	53. 1
1878	152, 853, 306	150, 592, 432	312, 445, 738	48. 9	51. 1

* There appears to have been received at New York by vessels coastwise 4,165,000 bushels in 1876, 4,064,639 bushels in 1877, and 3,606,219 bushels in 1878; which amounts are not included in the table.

There appears to have been but little change in the relative proportion of Western grain received at New York and at the other ports mentioned during the last seven years.

Until about eleven years ago the principal part of the Western grain consumed in the New England States was first shipped to New York City by the way of the lakes, the Erie Canal, and the Hudson River, and thence distributed by means of vessels to coastwise ports, and by railroads extending from New York into the New England States. There has, however, been an almost entire diversion of this traffic to direct rail routes, thus saving time and the incidental expenses attending shipments to New York City. Such direct shipments were not possible until after the railroads had entered into agreements by means of which commodities could be shipped over connecting lines on through bills of lading.

The diversion of the grain trade of the city of Boston with the West, from the route via New York to a direct trade over rail lines, is indicated by the following table:

Receipt of grain and flour at Boston from the West by water and by rail.

Year.	Flour.		Wheat.*		Corn.		Oats.		Barley.*	
	By water.	By rail.	By water.	By rail.	By water.	By rail.	By water.	By rail.	By water.	By rail.
	Bbls.	Bbls.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.
1866...	701, 727	733, 955	.....	.....	1, 847, 159	483, 875	656, 087	606, 033	64, 039	197, 951
1869...	506, 458	818, 827	.....	.....	1, 055, 676	1, 384, 284	338, 756	1, 076, 675	118, 178	122, 713
1870...	658, 714	995, 950	.....	.....	945, 961	1, 370, 421	423, 853	1, 676, 108	106, 536	254, 370
1871...	569, 303	1, 052, 042	.....	.....	481, 803	3, 156, 800	179, 807	2, 244, 086	84, 559	328, 811
1872...	493, 258	988, 491	.....	.....	320, 755	5, 119, 749	82, 767	2, 384, 699	85, 408	238, 488
1873...	534, 990	1, 282, 429	.....	.....	304, 867	3, 150, 198	35, 732	3, 245, 016	49, 655	373, 656
1874...	502, 021	1, 303, 851	32, 064	1, 290, 311	219, 894	2, 768, 382	36, 967	2, 885, 812	.....	.....
1875...	395, 994	1, 230, 137	20, 447	1, 086, 190	148, 277	4, 914, 007	196, 089	2, 499, 631	.....	.....
1876...	293, 066	1, 342, 191	5, 387	435, 368	66, 059	7, 963, 644	8, 596	2, 718, 574	.....	.....
1877...	239, 581	1, 463, 492	48, 372	1, 032, 325	88, 767	7, 931, 178	20, 062	3, 149, 861	.....	.....
1878...	175, 574	1, 061, 649	38, 639	4, 104, 598	163, 459	9, 556, 793	53, 433	3, 044, 372	.....	.....

*The receipts of barley have not been reported in detail since 1873. The record of wheat receipts cannot be procured prior to 1874.

The diversion of grain from the Erie Canal to the trunk railroads is largely due to the establishment of direct freight-lines between interior points at the West and points in the Atlantic seaboard States, and to the combinations which have been extensively entered into for the carriage of goods on through bills of lading over connecting roads. Such combinations have effected a great reduction in the cost of transportation by rail, as a result of the saving of terminal expenses and commissions at intermediate points of transshipment.

During the last ten years there has been an almost entire diversion of the class of freights known as "general merchandise" from the canals to the railroads. For several years the traffic on the Erie Canal has

been confined chiefly to agricultural and mineral products. The actual cost of moving freights on the lakes and on the New York canals is, however, much less than on any of the railroads of the country, and hence the Northern water-line is still able to secure the transportation of a very considerable proportion of the grain and other agricultural products shipped from Chicago, Milwaukee, and Duluth to New York City either for consumption at that point or for transportation thence to foreign countries.

The competition of the cheap Northern water-line not only regulates the rates which prevail for the transportation of grain from the West to New York City, but also, through the competition of product with product in the various markets of the country, effectually regulates the rates which prevail for the transportation of such products of the West by rail lines to Boston, Philadelphia, and Baltimore.

The shipment of flour has been almost entirely diverted from the canals. This is indicated by the following table showing the number of barrels of flour moved on all the canals of the State of New York during each year from 1862 to 1878:

Flour transported on the New York State canals each year from 1862 to 1878.

Years.	Wheat flour.	Years.	Wheat flour.
	<i>Barrels.</i>		<i>Barrels.</i>
1862.....	2, 102, 574	1870.....	509, 055
1863.....	1, 930, 731	1871.....	381, 533
1864.....	1, 474, 532	1872.....	190, 129
1865.....	1, 271, 129	1873.....	181, 731
1866.....	751, 870	1874.....	269, 759
1867.....	569, 334	1875.....	163, 237
1868.....	575, 898	1876.....	86, 019
1869.....	657, 870	1877.....	82, 021

13.—THE CONDITIONS UNDER WHICH COMPETITION EXISTS BETWEEN THE ERIE CANAL AND THE EAST AND WEST TRUNK RAILROAD LINES.

The New York Central Railroad is, and has been from the time of its completion, the most effective competitor of the Erie Canal. This is due to the fact that these two important highways of commerce run side by side nearly all the way from Albany to Buffalo. The entire local and through traffic of the two lines is competitive. The railroad has secured more than 90 per cent. of the local traffic, from the fact that it embraces principally the classes of goods which naturally seek the rapid and regular facilities of transport afforded by railroads, and which have in this country and in other countries accommodated themselves to the habits of railway transportation. The through traffic between Buffalo and Albany, which is now shared by the New York Central Railroad and the Erie Canal, is confined principally to lumber, minerals, and grain.

The growth of large towns and cities along the lines of the railroad and canal and throughout Central New York has created a large home market for the grain produced in that section of the State, leaving but a small amount which seeks transportation to the seaboard. Other agricultural products of the State of New York, generally of much higher value in proportion to weight than grain, are shipped by rail at hundreds of stations and towns on the lines of the 5,877 miles of railroad permeating all parts of the State, and are transported to their destination in the interior or on the seaboard on all-rail lines. Traffic of this character to and from points along the lines of the New York Central Railroad and the Erie Canal is, for the most part, transported by rail. General merchandise, shipped from New York City to the towns and cities between Albany and Buffalo, is chiefly transported by rail. Manufactured articles are shipped from the New England States to the West almost exclusively by rail.

Although, with respect to "through traffic," the Erie Canal successfully competes with the New York Central Railroad only for the transportation of grain, minerals, lumber, and other coarse freights, yet that water-way operates as a very important regulator of the rates which can be charged on that road for the transportation of all the higher and better paying classes of freight. If the rates by the road on any of these higher classes of freight are very much advanced, a large deflection of traffic at once takes place to the slower but cheaper mode of transportation by the canal. Rail rates are adjusted with reference to this contingency.

With respect to "through traffic," viz, traffic between the seaboard and the States west of the State of New York, especially the western and northwestern States, the Erie Canal has not only one, but several competitors. For this traffic the Grand Trunk Railway of Canada, the Lake and Canadian Canal route, the New York Central, the Erie Railway,* the Pennsylvania, and the Baltimore and Ohio Railroads are either directly or indirectly effective competitors. The New York Central Railroad, the Erie Railway, the Pennsylvania Railroad, and the Baltimore and Ohio Railroad are direct competitors of the Erie Canal for all traffic between New York City and the West. Each one of these first-named roads has an eastern terminus at New York City, and the Baltimore and Ohio Railroad is also able to secure a share of this traffic by means of the right of transit over the lines of the two roads forming a connection between the city of Baltimore and the city of New York. The managers of these connecting roads are obliged to enter into such arrangements with the Baltimore and Ohio Railroad Company, from the fact that a refusal to do so would cause that company to form a direct connection between Baltimore and New York by means of a steamer line.

The eastern trunk lines have also been enabled to secure a very large traffic by means of lake-steamer connections. Besides this, all the trunk

* Name recently changed to the New York, Lake Erie & Western Railroad.

lines are enabled, through their western connections, to secure the transportation of a very large amount of grain and other agricultural products of the West, which is not marketed at any one of the lake ports, and therefore does not become directly competitive as between the water lines and the various rail lines.

The competitive power of railroads has also been greatly increased within the last few years, by means of the combinations entered into between the various trunk lines and ocean steamer lines connecting the Atlantic seaports of this country with ports in Europe, by means of which agricultural products of the West may be transported on through bills of lading from interior points in the West to ports in Europe.

There has been a great reduction in the actual cost of rail transportation during the last ten years, as the result of improvements in the construction and equipment of railroads, the use of steel rails, the improvements made in railroad management, and especially as the result of arrangements entered into between connecting lines for the direct transportation of freights between distant points. The efficiency of railroads as highways of commerce has thus been greatly increased.

But the Erie Canal meets an indirect competition in the east and west trunk lines terminating at other seaports than New York. This indirect competition arises as follows: The cities of Montreal, Portland, Boston, Philadelphia, and Baltimore are, through the facilities afforded for direct transportation between those points and the great West, active competitors of the city of New York for the purchase of such surplus products of the West as are intended for exportation to foreign countries, especially to the countries of Europe. Such facilities for transportation are afforded to those cities at rivalry with New York by the Grand Trunk Railway, by the lake and Canadian canal route, and by the Pennsylvania and the Baltimore and Ohio Railroads and the eastern and western connections of these roads. This fact affords a striking illustration of the statements hereinafter presented in regard to the competition of rival routes and rival markets, and affords proof of the fact stated in that connection, that although railroads have a marked feature of monopoly on account of the entire traffic upon them being of necessity placed under one central control and management, yet the competition of rival routes, (both rail and water lines,) and the competition of rival markets resulting from the general extension of railroads and the formation of combinations between connecting roads for the transaction of through traffic, have begotten a fiercer and more ungovernable competition than that competition which usually exists on free highways, where it is possible for an unlimited number of common carriers to engage in the work of transportation.

The relative growth of traffic on the New York State canals, embracing the Erie Canal, the length of which is 352 miles, and also about 520 miles of lateral canals, and on the Erie Railway and the New York Central Railroad, with their connecting lines in the State of New York, is

exhibited in the following tables, taken from the report of the auditor of the State of New York :

Number of tons transported on the New York State canals and on the Central and Erie Railroads, 1855 to 1878.

Year.	Erie Railway.	New York Central Railway.	Total on the two railways.	New York State canals.	Total tonnage canals and railroads.
	Tons.	Tons.	Tons.	Tons.	Tons.
1855	842, 048	670, 078	1, 512, 121	4, 022, 617	5, 534, 738
1856	943, 215	776, 112	1, 719, 327	4, 116, 082	5, 835, 409
1857	978, 066	838, 791	1, 816, 857	3, 844, 061	5, 160, 918
1858	816, 954	765, 407	1, 582, 361	3, 665, 192	5, 247, 553
1859	869, 073	834, 819	1, 703, 892	3, 781, 684	5, 485, 076
1860	1, 139, 554	1, 028, 183	2, 167, 737	4, 650, 214	6, 817, 951
1861	1, 258, 418	1, 167, 802	2, 426, 220	4, 507, 635	6, 923, 855
1862	1, 632, 955	1, 387, 483	3, 020, 388	5, 568, 785	8, 519, 173
1863	1, 815, 096	1, 449, 604	3, 264, 700	5, 557, 662	8, 822, 392
1864	2, 170, 798	1, 557, 148	3, 727, 946	4, 852, 941	8, 580, 887
1865	2, 234, 350	1, 275, 290	3, 509, 649	4, 729, 654	8, 239, 303
1866	3, 242, 792	1, 602, 197	4, 844, 989	5, 775, 220	10, 620, 209
Twelve years ...	17, 938, 319	13, 351, 868	31, 290, 187	54, 601, 777	85, 891, 964
1867	3, 484, 546	1, 667, 926	5, 152, 472	5, 688, 325	10, 840, 797
1868	3, 908, 243	1, 846, 599	5, 754, 842	6, 442, 225	12, 197, 067
1869	4, 312, 209	2, 281, 885	6, 594, 094	5, 859, 080	12, 453, 174
1870	4, 852, 505	4, 123, 000	8, 974, 505	6, 173, 769	15, 148, 274
1871	4, 844, 208	4, 532, 056	9, 376, 264	6, 467, 888	15, 844, 152
1872	5, 564, 274	4, 393, 965	9, 958, 239	6, 673, 370	16, 631, 609
1873	6, 312, 702	5, 522, 724	11, 835, 426	6, 364, 782	18, 200, 208
1874	6, 364, 276	6, 114, 678	12, 478, 954	5, 964, 588	18, 283, 542
1875	6, 239, 946	6, 001, 954	12, 241, 900	4, 859, 858	17, 101, 758
1876	5, 972, 818	6, 803, 680	12, 776, 498	4, 172, 129	16, 948, 627
1877	6, 182, 451	6, 351, 356	12, 533, 807	4, 955, 963	17, 489, 770
1878	6, 150, 468	7, 695, 413	13, 845, 881	5, 171, 320	19, 017, 201
Twelve years ...	64, 188, 646	57, 334, 236	121, 522, 882	68, 633, 297	190, 156, 179

The foregoing table indicates the comparative traffic over the three lines during the last twenty-four years, and the total traffic during two periods of twelve years. During the first twelve years—1855 to 1866—the tonnage transported on the canals constituted 63.58 per cent. of the total tonnage moved on the three lines, but during the latter period of twelve years the tonnage transported on the canals constituted but 36.09 per cent. of the total tonnage transported on the three lines. During the first period of twelve years the tonnage transported on the canals exceeded the tonnage transported on the railroads by 23,311,590 tons, but during the latter period of twelve years the tonnage transported on the railroads exceeded the tonnage transported on the canals by 52,889,585 tons.

The total tonnage transported on the two railroads during the year 1878 was nine times the tonnage transported by them during the year 1855, while the tonnage transported on the canals in 1878 was but 28.56

per cent. greater than the tonnage of 1855, and it exhibited in 1878 a decline of $22\frac{1}{2}$ per cent. from the tonnage transported during the year 1872—the year of their largest traffic.

The following table exhibits the average freight charges per ton per mile on all classes of commodities from 1857 to 1876, inclusive. The table is taken from the report of the auditor of the canal department of the State of New York:

Charge for transportation per ton per mile on New York State canals and on the New York Central and New York, Lake Erie and Western Railroads, 1857-1878.

Year.	Rate per ton per mile.			Year.	Rate per ton per mile.		
	New York Central Railway.	Erie Railway.	New York State Canals.		New York Central Railway.	Erie Railway.	New York State Canals.
	Cents.	Cents.	Cents.		Cents.	Cents.	Cents.
1857.....	3.12	2.45	.799	1868.....	2.59	1.92	.88
1858.....	2.59	3.32	.797	1869.....	2.20	1.60	.92
1859.....	2.13	2.17	.672	1870.....	1.86	1.37	.83
1860.....	2.06	1.84	.994	1871.....	1.65	1.47	1.03
1861.....	1.96	1.73	1.08	1872.....	1.59	1.52	1.03
1862.....	2.22	1.89	.959	1873.....	1.57	1.45	.88
1863.....	2.40	2.09	.876	1874.....	1.47	1.31	.73
1864.....	2.75	2.31	1.15	1875.....	1.37	1.21	.66
1865.....	3.31	2.76	1.02	1876.....	1.05	1.07	.68
1866.....	2.92	2.45	1.	1877.....	1.02	.96	.57
1867.....	2.53	2.04	.9	1878.....	.91	.97	.42

It appears from the foregoing statements that freight charges have always been and are still, less on the canals than on the railroads. The railroads and canals alike exhibit a great reduction of freight charges during the last two years. The average charges per ton per mile on the New York Central Railroad fell from 2.59 cents in 1868 to .91 cent in 1878—a fall of nearly two-thirds the average rate during the former year. The average charge on the New York, Lake Erie and Western Railroad fell from 1.92 cents in 1868 to .97 cent in 1878—a decrease of 50 per cent.; and the average charge on the canals fell from .88 cent in 1868 to .42 cent in 1878—a fall of 52 per cent. A corresponding reduction in freight charges has taken place during the last ten years on all the other trunk lines of the country.

The fall in the average rate for the transportation of wheat from Buffalo to New York is exhibited in the following tables:

Average rates per bushel for the transportation of wheat from Buffalo to New York during each month of the canal-navigation seasons of the years 1871 and 1872.

Months.	1871.		1872.	
	By rail.	By canal.	By rail.	By canal.
	Cents.	Cents.	Cents.	Cents.
May	18	11.62	18	9.87
June	18	10.2	18	12.87
July	18	11.12	15.8	14.5
August	18	11.75	15	12.12
September	18	13.62	17.1	12.81
October	18	13.94	18.4	14.56
November	21	16.06	21	16
Average	18.4	12.62	18	13.1

Average rates per bushel for the transportation of wheat by canal and by rail from Buffalo to New York during each month of the navigation seasons of the years 1875 to 1878, inclusive.

Months.	1875.		1876.		1877.		1878.	
	By rail.	By canal.	By rail.	By canal.	By rail.	By canal.	By rail.	By canal.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
May	8.5	7.53	7.25	6.91	9	6.11	7.25	6.03
June	7	6.92	6.25	6.25	9	5.05	5.45	4.69
July	7.5	7.52	6	5.95	9	5.16	4.63	4.37
August	8.2	8.25	6	5.67	9	6.82	5.88	5.79
September	7	7.1	6	6.24	9	7.36	8.13	8.08
October	8.2	8.11	6.94	7.92	11	10.71	8.5	8.16
November	11	10.62	8.5	7.93	12	10.52	8.17	4.98
Average	8.2	8.01	6.71	6.72	9.72	7.39	7	5.99

The average rates by rail fell from 18.4 cents in 1871 to 7 cents in 1878, and the average rate by canal fell from 12.6 cents in 1871 to 5.99 cents in 1878. During the year 1878 the rate for the transportation of wheat from Buffalo to New York by canal fell as low as 4½ cents per bushel.

The extent of the diversion of grain from the canals to the railroads may be inferred from the following table, showing the amount of grain received at New York by rail and by canal during the last three years:

Receipts of grain at New York by the Erie and Champlain Canals compared with receipts by rail.

Year.	By canal.	By rail.	Total.	Per cent. by canal.
	Bushels.	Bushels.	Bushels.	
1876	32,735,773	50,047,953	95,949,252	34.12
1877	48,356,176	50,892,967	103,813,782	46.81
1878	63,905,872	85,350,079	152,862,170	41.81

The rail-receipts at New York from the West embrace receipts by the New York Central, the New York, Lake Erie and Western Railroad, the Pennsylvania, and the Baltimore and Ohio Railroads.

The following table exhibits the receipts of flour and grain at tide-water by the Erie and Champlain Canals, in comparison with the total receipts at the seven principal Atlantic seaports, viz, Montreal, Portland, Boston, New York, Philadelphia, Baltimore, and New Orleans, from 1872 to 1878.

Receipts of flour and grain at tide-water by the Erie and Champlain Canals, with the deliveries at the principal Atlantic seaboard ports, 1872 to 1878.

(From the New York Produce Exchange Report.)

Year.	Receipts at seven Atlantic sea- board ports.	Receipts by canals.	Seaboard receipts in excess of canal receipts.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1872	185,774,160	53,863,909	131,910,251
1873	189,099,703	49,060,180	140,039,523
1874	208,497,486	51,463,861	155,033,625
1875	194,209,846	39,531,494	154,678,352
1876	227,752,173	31,766,400	195,985,773
1877	220,098,961	48,083,000	172,015,961
1878	312,445,736	62,561,600	249,884,136

The amount received otherwise than by canal increased from 131,910,251 bushels during the year 1872 to 249,884,136 during the year 1878, and the receipts by canal from 53,863,909 bushels in 1872 to 62,561,600 bushels in 1878.

THE PRODUCTION AND EXPORTATION OF BREADSTUFFS.

The total production, total acreage of crop, and total value of the crop of cereals in the United States are presented in table No. 42 of the Appendix (page 216), of which the following table is a summary statement:

Calendar year.	Total production.	Total area of crop.	Total value of crop.
	<i>Bushels.</i>	<i>Acres.</i>	<i>Dollars.</i>
1868	1, 450, 789, 000	66, 715, 926	1, 110, 500, 583
1869	1, 491, 412, 100	69, 457, 762	1, 101, 884, 188
1870	1, 629, 027, 600	69, 254, 016	997, 423, 018
1871	1, 528, 776, 100	65, 061, 951	911, 845, 441
1872	1, 664, 331, 600	68, 280, 197	874, 594, 459
1873	1, 538, 892, 891	74, 112, 137	919, 217, 273
1874	1, 454, 180, 200	80, 051, 289	1, 015, 530, 570
1875	2, 032, 235, 300	86, 803, 178	1, 030, 277, 099
1876	1, 962, 821, 600	93, 920, 619	935, 008, 844
1877	2, 178, 934, 646	93, 150, 288	1, 035, 570, 478
1878	2, 302, 254, 950	100, 956, 260	813, 975, 920
Total	19, 233, 655, 987	867, 823, 623	10, 745, 827, 873
Annual average	1, 748, 514, 180	78, 893, 056	976, 893, 443

The proportion of each of the different cereals which constituted the total crop of 1878, as compared with the proportion of the same which constituted the total production during the ten years from 1868 to 1877, inclusive, is shown as follows:

Cereals.	From 1868 to 1877, inclusive.	1878.
	<i>Per cent.</i>	<i>Per cent.</i>
Corn	63. 1	60. 3
Wheat	16. 14	18. 25
Oats	17. 2	17. 95
Barley	1. 81	1. 84
Rye	1. 1	1. 13
Buckwheat .....	. 65	. 53
	100. 00	100. 00

Comparing the average production *per capita* of each crop during the ten years from 1868 to 1877 with the production *per capita* of corresponding crops during the year 1878, the following results are obtained:

	<i>Bushels.</i>
Corn exhibited an increase from an average of.....	25.76 to 28.92
Wheat exhibited an increase from an average of.....	6.6 to 8.75
Oats exhibited an increase from an average of.....	7.10 to 8.61
Barley exhibited an increase from an average of.....	.74 to .88
Rye exhibited an increase from an average of.....	.43 to .54

The production of buckwheat exhibited no change. The foregoing facts indicate a steady increase in the production of cereals in this country, both in the acreage and in the amount *per capita* of population.

The total home value of the cereal products of the country during 1877, was nearly as large as the total value of the combined imports and exports of the United States in our trade with foreign countries, during the year ended June 30, 1878. The total cereal products of 1878 was larger in quantity than that of 1877 by 6 per cent., but was less in value by 21 per cent.

The quantity of wheat and corn exported during the year ended June 30, 1878, constituted 10.4 per cent. of those cereals produced during the previous crop year, and the quantity exported during the last fiscal year constituted 13 per cent. of the quantity produced in 1878.

The total product and the home value of the cereal crops of the United States for the years 1877 and 1878, and the quantities exported during the years ended June 30, 1878 and 1879.

Cereals.	Crop.		Value of crop.	
	1877.	1878.	1877.	1878.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Corn.....	1,342,558,000	1,388,218,750	480,643,400	441,153,405
Wheat.....	364,194,146	420,122,400	394,695,779	336,346,424
Oats.....	406,394,000	413,578,560	118,661,550	101,945,830
Barley.....	34,441,400	42,245,630	23,028,044	24,483,315
Rye.....	21,170,100	25,842,790	12,542,895	13,592,826
Buckwheat.....	10,177,000	12,246,820	6,998,810	6,454,120
Total.....	2,178,934,646	2,302,254,950	1,035,570,478	813,975,920

Cereals.	Value per bushel.		Exported during the fiscal year ended June 30—		Per cent. exported.	
	1877.	1878.	1878.	1879.	1878.	1879.
	<i>Cents.</i>	<i>Cents.</i>	<i>Bushels.</i>	<i>Bushels.</i>		
Corn.....	35.8	31.8	87,192,110	87,884,892	6.49	6.33
Wheat.....	108.3	77.7	90,167,950	147,687,649	24.76	35.15
Oats.....	29.2	24.6	3,715,479	5,452,136	.91	1.23
Barley.....	63.9	58.	3,921,501	715,536	11.39	1.69
Rye.....	59.2	52.6	4,239,241	4,871,294	20.03	18.85
Buckwheat.....	68.7	52.7				

The crops of 1877 and 1878 furnished the larger portion of the exports of the years ended June 30, 1878 and 1879, respectively.

The following table exhibits the value of the bread and breadstuffs exported to each foreign country during the year ended June 30, 1879.

Exports of bread and breadstuffs during the year ended June 30, 1879.

Order.	Countries.	Values.	Per cent. of total.
1	The United Kingdom	\$107,091,875	50.91
2	France	48,098,327	23.15
3	Belgium	12,150,976	5.78
4	British possessions in North America	11,172,798	5.31
5	Brazil	4,331,436	2.06
6	Portugal	4,257,302	2.03
7	Netherlands	3,541,774	1.68
8	Germany	2,844,931	1.35
9	British West Indies and British Honduras	2,757,745	1.31
10	Cuba	1,431,349	.68
11	China (including Hong-Kong)	1,264,682	.60
12	Hayti and San Domingo	788,765	.37
13	Gibraltar and British possessions in Africa	787,090	.37
14	British Guiana	756,709	.36
15	Venezuela	660,930	.32
16	Denmark	598,999	.29
17	Italy	564,261	.27
18	French West Indies and French Guiana	522,863	.25
19	Central America	511,203	.24
20	Porto Rico	335,303	.16
21	Danish West Indies	280,366	.13
22	Mexico	275,774	.13
23	Dutch West Indies and Dutch Guiana	264,753	.13
24	United States of Colombia	222,560	.11
25	Azore, Madeira, and Cape Verde Islands	214,463	.10
26	Sweden and Norway	173,802	.08
	All other countries, islands, and ports	3,854,522	1.83
	Total	210,355,523	100.00

A large proportion of the exports of breadstuffs to the Dominion of Canada consists of shipments in transit from the United States to Great Britain, either by the lake and canal route to Montreal, or by rail from interior points at the West to Montreal, whence such commodities are shipped to the United Kingdom during the season of navigation on the Saint Lawrence River.

Of the total exports of bread and breadstuffs during the year ended June 30, 1879, 85.53 per cent. was shipped to Europe, 1.08 per cent. to Asia, Africa, and Australasia, and 6.25 per cent. to Mexico, Central America, the West Indies and South America.

The exports of bread and breadstuffs are stated for the year ended June 30, 1879, as follows:

	Bread and breadstuffs.	Value.
		<i>Dollars.</i>
1	Wheat, including wheat flour.....	160,268,792
2	Indian corn, including Indian corn meal.....	41,707,351
3	Rye and rye flour.....	3,119,063
4	Barley.....	401,180
5	Oats.....	1,618,644
6	Other small grain and pulse.....	817,536
7	Bread and biscuit.....	682,471
8	All other preparations of breadstuffs used as food.....	1,740,471
	Total.....	210,355,528

Of the total value of exports of bread and breadstuffs during the year ended June 30, 1879, wheat and wheat flour constituted 76 per cent. and Indian corn and Indian corn meal 20 per cent., together constituting 96 per cent. of the total value of exports of breadstuffs, the other articles specified constituting but 4 per cent. of such exports.

The following table exhibits the quantity of wheat and of corn, including wheat flour and corn meal, exported each year from 1850 to 1879, inclusive:

Year ended June 30—	Wheat and wheat flour.	Corn and corn meal.	Year ended June 30—	Wheat and wheat flour.	Corn and corn meal.
	<i>Bushels.</i>	<i>Bushels.</i>		<i>Bushels.</i>	<i>Bushels.</i>
1850.....	6,843,177	7,632,860	1865.....	21,657,561	3,610,402
1851.....	10,937,232	4,240,699	1866.....	15,402,828	14,465,751
1852.....	14,291,565	3,351,495	1867.....	11,996,888	16,026,947
1853.....	17,034,273	3,123,881	1868.....	25,284,902	12,493,522
1854.....	26,137,402	8,798,428	1869.....	28,501,264	8,286,665
1855.....	6,219,314	8,676,417	1870.....	52,160,113	2,140,467
1856.....	23,952,694	11,466,708	1871.....	50,747,190	10,673,553
1857.....	31,274,560	8,575,334	1872.....	37,738,487	35,727,010
1858.....	24,730,056	5,716,698	1873.....	50,733,672	40,154,374
1859.....	13,945,224	2,755,538	1874.....	89,463,351	35,965,834
1860.....	15,907,335	4,248,901	1875.....	70,928,253	30,025,036
1861.....	50,694,950	11,491,496	1876.....	72,782,926	50,910,532
1862.....	59,258,720	19,919,189	1877.....	55,372,103	72,632,611
1863.....	55,915,661	17,151,268	1878.....	90,167,950	87,192,110
1864.....	39,689,773	5,146,122	1879.....	147,687,649	87,884,892

NOTE.—The barrel of wheat flour has been assumed to be equivalent to four and one-half bushels of grain; the barrel of corn meal to four bushels.

Wheat.

The number of bushels of wheat, including wheat-flour, exported during the year ended June 30, 1879, was larger than during any previous year. From 1850 to 1859, inclusive, the average annual exports of wheat and wheat-flour amounted to 17,536,641 bushels; from 1860

to 1869, inclusive, the average annual exports amounted to 32,430,982 bushels; and during the last ten years, from 1870 to 1879, inclusive, the average annual export amounted to 71,778,870 bushels.

From careful estimates of the production of wheat, it appears that the average annual crop is increasing more rapidly than is the population of the country. The average wheat crop of the United States, twenty years ago, is estimated to have been between five and six bushels *per capita*; but the crop of the years 1876 and 1877 amounted to nearly eight bushels *per capita*.

The wheat crop of the year 1878 was larger than any previous crop, estimated at 420,122,400, or 8.75 bushels *per capita*. The quantity of wheat, including wheat flour, exported from the United States to foreign countries, from 1830 to 1879 is shown in the table on page 246 of the appendix.

It appears from this table that during the last five years 60 per cent. of the wheat and wheat-flour exported from the United States was shipped directly to Great Britain. Besides, almost all the wheat and wheat-flour exported to Canada was afterward shipped from Montreal to Great Britain. Adding the latter to the direct exports, it appears that about 69 per cent. of our exports of wheat and wheat-flour was to Great Britain.

The following table shows the quantity of wheat, including wheat flour, exported from the United States to each of the principal grain-importing countries of the globe during the year 1879.

Wheat exported to each foreign country during the year ended June 30, 1879.

Countries.	Bushels.	Per cent.
Great Britain and Ireland	69,252,784	46.9
Canada and other British possessions of North America	7,476,173	5.1
West Indies and Central America	4,131,834	2.8
Brazil	2,228,196	2.2
France	42,269,396	28.6
All other countries	21,329,266	14.4
Total	147,687,649	100.0

As already stated, almost all the wheat exported to Canada was afterward shipped from Montreal to Liverpool, and therefore constituted a part of the wheat-export from the United States to Great Britain.

Corn.

It appears from the table on page 247 that there was a larger quantity of Indian corn, including corn-meal, exported during the last fiscal year than during any previous year. During the ten years from 1850 to 1859, inclusive, the average annual exports of corn and corn-meal amounted to 6,453,775 bushels; during the ten years from 1860 to 1869, inclusive, the annual average quantity exported amounted to 11,284,035 bushels; and

during the ten years from 1870 to 1879, inclusive, the annual average quantity exported amounted to 45,334,644 bushels.

It is estimated that the acreage devoted to the production of corn in the United States increased about 33 per cent. from 1870 to 1878, while the increase of population is estimated to have been about 23 per cent.

The quantity of corn exported in the form of grain and of corn-meal is much less than the quantity consumed by animals constituting the exports of live animals and provisions. A considerable quantity of corn also enters into our exports of spirits.

The quantity of corn exported from the United States to foreign countries from 1850 to 1879 is shown in the table on page 247 of the appendix. It appears from this table that during the last five years 76.62 per cent. of all the corn exported from the United States was shipped directly to Great Britain and Ireland.

The following table shows the quantity of corn exported during the year 1879 to each one of the principal grain-importing countries of the globe:

Corn exported to each foreign country during the year ended June 30, 1879.

Countries.	Bushels.	Per cent.
Great Britain and Ireland	64,525,543	73.4
Canada and other British possessions in North America	8,144,735	9.3
West Indies and Central America	1,619,264	1.9
Germany	3,894,671	4.4
France	2,564,346	2.9
All other countries	7,136,333	8.1
Total	87,884,892	100.0

Almost all the corn exported to Canada was afterward shipped from Montreal to Liverpool, and therefore constituted a part of the corn export from the United States to Great Britain.

The quantities of both wheat and corn exported to each foreign country and the total quantity exported from the United States appear to be subject to great fluctuations. Since 1860 our annual exportations of wheat have ranged from 12,000,000 bushels to about 148,000,000 bushels, and our annual exportations of corn have ranged from 2,000,000 to nearly 88,000,000 bushels.

The average export price of wheat fell from \$1.29 per bushel in 1870 to \$1.07 per bushel in 1879, and the average export price of corn fell from 93 cents per bushel in 1870 to 47 cents per bushel in 1879. The fall in the price of corn was due chiefly to the increase in the corn product from 874,320,000 bushels in 1869 (the year in which the exports of 1870 were produced) to 1,388,218,750 bushels in 1878.

The reduction which has taken place during the last four years in the cost of transportation between the West and the seaboard has had a marked effect in reducing the export price of corn, and of certain other

agricultural products of the West, and has been one of the principal causes of the rapid increase in the exportation of the products of agriculture to foreign countries.

THE EXPORTATION OF BREADSTUFFS AT THE PRINCIPAL ATLANTIC SEAPORTS.

As the transportation of breadstuffs affords a larger amount of employment to the East-and-West trunk railroads, to the northern water line, and to ships upon the ocean than is furnished by the transportation of any other product of the country, the following facts in regard to the exportation of grain from the principal seaports of the Atlantic and Gulf coast have an important bearing upon the changes which have taken place both in the course of the internal and of the foreign commerce of the United States.

The following table indicates the quantity of wheat, wheat-flour, and corn exported from the five principal ports on the Atlantic and Gulf coasts from 1856 to 1879, inclusive:

[Barrels of flour reduced to bushels at $4\frac{1}{2}$ bushels to the barrel. Barrels of corn-meal reduced to bushels at 4 bushels to the barrel.]

Year ended June 30—	Ports.				
	Boston.	New York.	Philadelphia.	Baltimore.	New Orleans.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1856	961, 032	16, 771, 770	2, 811, 206	3, 734, 071	5, 170, 406
1857	1, 065, 533	21, 313, 446	3, 116, 964	4, 233, 963	4, 316, 004
1858	821, 562	13, 860, 523	1, 976, 834	3, 436, 251	3, 868, 554
1859	746, 981	6, 577, 630	1, 166, 923	1, 996, 044	818, 025
1860	839, 376	9, 147, 619	1, 396, 499	2, 080, 915	589, 637
1861	1, 815, 035	40, 567, 139	4, 375, 115	4, 228, 906	167, 633
1862	2, 344, 268	57, 487, 038	5, 520, 299	2, 829, 163	.....
1863	1, 777, 638	50, 104, 354	3, 780, 259	2, 669, 350	173, 873
1864	1, 467, 235	30, 629, 418	2, 003, 406	1, 777, 011	184, 666
1865	1, 176, 792	14, 317, 139	1, 439, 135	1, 382, 678	138, 827
1866 .....	.....	.....	.....	.....	.....
1867	621, 735	14, 868, 911	1, 345, 729	1, 602, 586	150, 774
1868	1, 068, 520	20, 277, 576	1, 197, 460	1, 043, 189	809, 047
1869	1, 014, 183	17, 887, 006	684, 898	1, 879, 379	1, 393, 466
1870	860, 329	29, 470, 868	1, 810, 098	2, 589, 950	1, 719, 011
1871	1, 308, 431	32, 388, 506	1, 685, 462	3, 584, 451	1, 257, 656
1872	2, 509, 259	41, 945, 753	4, 569, 837	6, 742, 127	1, 196, 938
1873	2, 186, 905	42, 237, 154	4, 032, 183	7, 760, 174	1, 192, 360
1874	2, 376, 171	70, 427, 468	6, 762, 148	12, 777, 748	2, 056, 699
1875	3, 050, 728	49, 311, 819	7, 229, 218	10, 753, 914	777, 127
1876	3, 437, 507	56, 228, 535	15, 835, 883	18, 313, 592	1, 942, 964
1877	5, 523, 917	40, 354, 406	15, 418, 283	25, 232, 434	3, 188, 251
1878	8, 957, 032	79, 244, 083	23, 225, 774	30, 603, 265	6, 781, 217
1879	14, 135, 237	101, 719, 249	30, 612, 530	45, 098, 216	5, 920, 487

Prior to the year 1872 but a very small portion of the exports of grain from Boston, Philadelphia, and Baltimore was produced in the Western and Northwestern States. About that time, however, the East-and-West

trunk lines commenced to engage in the transportation of cereal products to their respective eastern termini; and they have ever since been active competitors of the Lake-and-Erie-Canal route, and the cities of Boston, Philadelphia, and Baltimore have, therefore, been active competitors of the city of New York for the trade in such products of the West.

The growth of the Western grain traffic at Boston, New York, Philadelphia, Baltimore, and New Orleans during the four years, 1869 to 1872, in comparison with the traffic during the last four years, 1876 to 1879, may be inferred from the following comparative table:

Port.	Exports, 1869 to 1872.	Exports, 1876 to 1879.	Actual in- crease.	Percentage of increase.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	
Boston.....	5, 000, 202	33, 053, 683	27, 363, 481	480. 80
New York.....	121, 692, 218	277, 546, 273	155, 854, 055	128. 07
Philadelphia.....	8, 750, 295	85, 092, 470	76, 342, 175	872. 45
Baltimore.....	14, 795, 907	119, 247, 507	104, 451, 600	703. 95
New Orleans.....	5, 567, 071	17, 832, 919	12, 265, 848	220. 33

The increase in the exports of wheat and corn at New York amounted to 155,854,055 bushels, and the increase in the exports at the four other ports amounted to 220,423,104 bushels.

Of the total exports at the five ports mentioned, there was exported from New York during the year 1869, 78.25 per cent.; during the year 1872, 73.64 per cent.; during the year 1874, 74.61 per cent.; during the year 1876, 58.11 per cent., and during the year 1878, 53.25 per cent. The exports of grain from the five ports mentioned, during the year 1879, were greater than during any previous year in the history of the country

THE MOVEMENTS OF THE COTTON CROP OF THE UNITED STATES.

The cotton crop of each commercial year ending August 31, for the years 1841 to 1879, inclusive, is presented as follows:

The cotton crop from 1841 to 1879.

Year.	Bales.	Year.	Bales.	Year.	Bales.
1840-'41.....	1, 639, 353	1853-'54.....	3, 035, 027	1866-'67.....	2, 059, 271
1841-'42.....	1, 688, 675	1854-'55.....	2, 932, 339	1867-'68.....	2, 498, 895
1842-'43.....	2, 394, 203	1855-'56.....	3, 645, 345	1868-'69.....	2, 439, 089
1843-'44.....	2, 108, 579	1856-'57.....	3, 056, 519	1869-'70.....	3, 154, 946
1844-'45.....	2, 484, 662	1857-'58.....	3, 238, 962	1870-'71.....	4, 352, 317
1845-'46.....	2, 170, 537	1858-'59.....	3, 994, 481	1871-'72.....	2, 974, 351
1846-'47.....	1, 860, 479	1859-'60.....	4, 823, 770	1872-'73.....	3, 920, 508
1847-'48.....	2, 424, 113	1860-'61.....	3, 828, 086	1873-'74.....	4, 170, 368
1848-'49.....	2, 808, 596	1861-'62.....	No record.	1874-'75.....	3, 832, 991
1849-'50.....	2, 171, 706	1862-'63.....	No record.	1875-'76.....	4, 069, 288
1850-'51.....	2, 415, 257	1863-'64.....	No record.	1876-'77.....	4, 485, 423
1851-'52.....	3, 090, 029	1864-'65.....	No record.	1877-'78.....	4, 811, 253
1852-'53.....	3, 352, 882	1865-'66.....	2, 228, 987	1878-'79.....	5, 073, 531

The statistics of cotton presented in the foregoing table are taken from the annual crop statements of the New York Shipping List, down to the year 1871. The statistics for the years 1872 to 1879 are taken from the New York Commercial and Financial Chronicle. The statistics of the production and of the movements of cotton during the years 1875 to 1879, inclusive, have also been collected and compiled by the National Cotton Exchange of America, the principal office of which is at New Orleans. Mr. Henry G. Hester, the secretary of that association, has also furnished to this office much valuable information in regard to the production and the movements of cotton. This may be found in the Appendix to this report.

The cotton crops of the United States during the years 1875 to 1879, inclusive, as stated by the National Cotton Exchange, are presented, as follows:

Year.	Bales.	Year.	Bales.
1875.....	3, 827, 845	1878.....	4, 773, 806
1876.....	4, 632, 313	1879.....	5, 074, 155
1877.....	4, 474, 069		

By comparing the data in regard to the cotton crop as presented by the two authorities above mentioned, it will be observed that very little difference exists between the two statements; a fact indicative of the high degree of accuracy which has been attained in the collection of statistics of the production of cotton in the United States. It is probable that the statistical development of the production and movements of cotton in the United States has been carried to a much higher degree of perfection than have similar statistics in regard to any other product of the country.

The quantity of cotton produced in this country during the last five years exceeded the quantity produced during the five years from 1856 to 1860. This is shown as follows:

	Bales.
Produced from 1856 to 1860	18, 759, 077
Produced from 1875 to 1879	22, 872, 498
Excess during the latter period	4, 113, 421

This shows an increase of 22 per cent.

The comparison between the production of the last ten years and of the ten years from 1851 to 1860, inclusive, is as follows:

	Bales.
Produced from 1851 to 1860	33, 584, 611
Produced from 1870 to 1879	41, 455, 008
Excess during the latter period	7, 870, 397

This shows an increase of 23.4 per cent.

The general movements of the cotton crop may be described as follows: First. The movement on the Mississippi River and on railroads towards Gulf ports, from whence it is shipped to northern ports in the United States and to ports in foreign countries. Second. The ship-

ment on railroads to Atlantic seaports south of the Potomac River, from whence it is shipped to seaports in the Northern States and to ports in foreign countries. Third. The overland movement from the cotton-growing States to points in the North Atlantic States on railroads crossing the Ohio and Mississippi Rivers. This latter movement is, of course, confined to railroads situated north and west of the Alleghany Range.

The changes which have taken place in the relative magnitude of these movements serve strikingly to illustrate important conditions surrounding and governing the course of the internal commerce of this country.

THE "OVERLAND MOVEMENT" OF COTTON.

The movement "overland from Tennessee" was of little importance prior to the year 1861. There is a record of 100 bales having been transported overland during the year 1835-'36. During the year 1839-'40 this movement reached 3,250 bales, and in 1852-'53 it reached 9,740 bales.

The record of the overland movement for ten years, from 1852 to 1861, is as follows:

Years.	Bales.	Years.	Bales.
1851-'52	175	1856-'57	4,754
1852-'53	9,740	1857-'58	9,624
1853-'54	12,430	1858-'59	85,321
1854-'55	7,661	1859-'60	108,678
1855-'56	14,215	1860-'61	143,424

The following table is a record of the growth of the overland movement of cotton as reported by the New York Commercial and Financial Chronicle, for the years ending August 31, from 1866 to 1878, inclusive:

The overland movement of cotton from 1866 to 1878.

Years.	Direct to man- ufactures.	To northern markets.	Total overland.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1865-'66	40,000	.....	.....
1866-'67	42,000	.....	.....
1867-'68	198,613	194,970	393,583
1868-'69	256,611	181,189	439,800
1869-'70	153,825	196,591	350,416
1870-'71	228,923	331,578	560,501
1871-'72	122,065	220,121	342,186
1872-'73	141,500	260,796	402,296
1873-'74	237,572	256,511	497,083
1874-'75	205,339	256,412	461,751
1875-'76	333,146	370,634	703,780
1876-'77	300,282	336,604	636,886
1877-'78	317,620	376,020	693,640
1878-'79	474,255	417,364	891,619

The rapid increase in the overland movement of cotton has been due chiefly to the combinations entered into between connecting railroads for its direct shipment, on through bills of lading, from points throughout the "cotton belt" to points in the New England States and in the other North Atlantic States.

The overland movement during the year ended August 31, 1879, constituted 63 per cent. of the quantity taken for northern manufacture, and 44 per cent. of the aggregate of northern consumption and northern exports, which together embraced the total movement, both overland and coastwise, to the North during that year.

The following table indicates the points at which the cotton constituting the overland movement crossed the Ohio and Mississippi Rivers from the year ended August 31, 1870, to the year ended August 31, 1879, and the quantity at each point:

The overland movement of cotton via the points herein mentioned.

Years.	Receipts at—							Total.
	Saint Louis.	Hannibal.	Cairo.	Evansville and Shawneetown.	Louisville.	Cincinnati.	All other points.	
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
1869-70	18, 298	.....	21, 567	40, 371	106, 506	146, 424	17, 250	350, 416
1870-71	19, 726	.....	76, 509	32, 085	210, 341	215, 758	11, 500	*565, 919
1871-72	36, 421	.....	22, 646	21, 894	122, 100	122, 128	18, 000	343, 189
1872-73	51, 795	2, 213	23, 674	22, 369	171, 296	108, 949	23, 000	402, 296
1873-74	92, 196	6, 148	23, 383	34, 353	216, 727	103, 276	21, 000	497, 083
1874-75	123, 805	8, 474	68, 655	14, 834	178, 677	55, 275	†12, 031	461, 751
1875-76	243, 064	27, 591	106, 034	18, 174	209, 699	94, 110	5, 108	703, 780
1876-77	212, 651	37, 296	114, 015	13, 874	165, 988	84, 226	8, 884	636, 886
1877-78	248, 337	33, 558	100, 212	17, 846	167, 654	115, 415	†11, 118	693, 640
1878-79	332, 101	112, 301	107, 285	14, 061	193, 725	118, 989	13, 157	891, 619

*Including 5,418 bales previously counted at New Orleans.

†In addition to 10,539 bales shipped to mills on the Ohio River above Cincinnati, 579 bales came over the Midland and Great Southern Railroad in 1877-78, and 31 in 1874-75.

The most noticeable fact in connection with the "overland movement" is the large increase in the movement via Saint Louis. This has been the result of the rapid increase in the production of cotton west of the Mississippi River, mainly in the State of Texas, and of the extension of the facilities for the transportation of cotton from the trans-Mississippi States to Saint Louis by rail.

The proportion passing Cairo since 1870 has increased from 6.2 to 14.5 per cent. The Hannibal route was opened during the year ended August 31, 1873. The relative proportion reaching the Ohio River

towns has declined. The following statement presents the percentages which passed each point during the years 1870 and 1878:

	Year ended August 31—	
	1870.	1878.
Saint Louis	5.2	35.8
Hannibal		4.8
Cairo	6.2	14.5
Evansville, &c.	11.6	2.5
Louisville	30.4	24.2
Cincinnati	41.8	16.6
Other points	4.8	1.6
Total	100.0	100.0

During the last ten years a large amount of cotton has been purchased at the South by manufacturers of the Northern States and of foreign countries, and transported by direct consignment from the point of production to the factory. This new mode of commercial intercourse is carried on mainly through agents who make selections throughout the cotton-growing States of the exact grades desired. By this means the incidental expenses of commissions, warehousing, handling, &c., are saved. This has tended to increase the direct overland rail movement.

There are now many routes for the transportation of cotton, and at all the important competing centers of the South the option is presented of shipment by either of several different routes. The competition between the rival routes is very sharp, and oftentimes a difference of $\frac{1}{8}$ to $\frac{1}{4}$ of a cent per pound will turn the course of the cotton trade from one direction to another.

The great improvements made in cotton-presses during the last few years have led to very important economic advantages as to the transportation of cotton by rail. Formerly only about twenty-two bales of cotton could be loaded into a railroad car, but by the use of the improved compress about forty-seven bales can now be carried in the same car space, an increase of over 100 per cent. This has greatly reduced the cost of transportation, and has tended to change the course of the cotton movement.

The movements of the entire cotton crop of the year 1878-79 appear to have been approximately as follows:

	Bales.
Shipped to Gulf ports	2, 188, 607
Shipped to South Atlantic ports	1, 915, 971
Shipped overland	819, 619

THE SHIPMENTS OF COTTON TO SOUTH ATLANTIC AND GULF PORTS.

There has been an important change made in the movements of cotton by the shipment of it on rail lines from points throughout the cotton belt to South Atlantic ports, chiefly the ports of Norfolk, Va., Wilming-

ton, N. C., Charleston, S. C., and Savannah, Ga. This, as well as the overland movement to the North, has caused a deflection of cotton shipments from the Gulf ports.

The ports of Norfolk, Va., Wilmington, N. C., Charleston, S. C., and Savannah, Ga., are not to any considerable extent cotton markets. The cotton which passes through these ports consists largely of direct shipments made from interior points throughout the South to Northern seaports or manufactories in the Northern States, by means of arrangements entered into between railroads and ocean steamer lines. To some extent, also, cotton is shipped direct from interior points in the cotton-growing States to foreign countries through the ports of Norfolk, Wilmington, Charleston, and Savannah, by means of combinations entered into for such direct shipments between the railroads of the Southern States and steamers sailing from these ports to foreign countries.

The receipts* of cotton at the South Atlantic and Gulf ports of the United States during the years ended August 31, 1855 to 1879, inclusive, are shown in the following table:

Receipts of cotton at South Atlantic and Gulf ports.

Years.	Galveston and Texas ports.	New Orleans.	Mobile.	Apalachicola and Florida ports.	Savannah and Georgia ports.	Charleston and South Carolina ports.	Wilmington and North Carolina ports.	Norfolk and Virginia ports.
1854-'55	80, 737	1, 232, 644	454, 595	136, 597	378, 694	499, 272	26, 139	31, 000
1855-'56	116, 078	1, 661, 433	659, 738	144, 404	389, 445	495, 976	26, 098	20, 458
1856-'57	89, 882	1, 435, 000	503, 177	136, 344	322, 111	397, 391	27, 147	23, 773
1857-'58	145, 286	1, 576, 409	523, 364	122, 351	283, 973	406, 251	23, 999	24, 705
1858-'59	192, 062	1, 669, 274	704, 406	173, 484	475, 788	480, 653	37, 482	33, 011
1859-'60	252, 424	2, 139, 425	843, 012	192, 724	525, 219	510, 109	41, 194	56, 967
1860-'61	144, 747	1, 751, 599	546, 794	121, 173	477, 584	336, 339	56, 295	73, 132
1861-'62*								
1862-'63*								
1863-'64*								
1864-'65*								
1865-'66	175, 065	711, 629	429, 102	149, 132	258, 798	112, 462	64, 653	39, 093
1866-'67	186, 496	702, 131	239, 516	57, 451	248, 601	162, 247	38, 623	127, 867
1867-'68	114, 666	584, 240	366, 193	38, 593	495, 959	240, 431	38, 643	166, 587
1868-'69	147, 817	794, 205	230, 621	13, 392	357, 253	199, 072	35, 908	140, 971
1869-'70	246, 284	1, 142, 097	306, 061	22, 874	488, 204	246, 500	59, 612	202, 898
1870-'71	321, 804	1, 446, 490	404, 673	13, 948	726, 406	350, 582	94, 320	342, 353
1871-'72	197, 956	957, 538	238, 012	19, 359	450, 539	271, 241	52, 523	276, 098
1872-'73	243, 450	1, 240, 384	332, 457	14, 068	614, 039	374, 476	61, 576	433, 583
1873-'74	389, 045	1, 221, 698	299, 578	14, 185	625, 857	438, 194	57, 895	505, 876
1874-'75	308, 283	993, 775	320, 822	10, 982	603, 246	438, 897	101, 715	418, 114
1875-'76	488, 640	1, 415, 959	374, 672	17, 434	524, 825	416, 372	107, 396	529, 126
1876-'77	506, 634	1, 195, 035	360, 918	23, 089	491, 800	468, 024	138, 087	575, 941
1877-'78	461, 823	1, 391, 519	419, 071	21, 818	604, 676	450, 980	150, 505	513, 985
1878-'79	582, 118	1, 187, 365	362, 408	56, 716	704, 752	507, 021	135, 815	568, 338

* No statistics during the war period.

* By "receipts" is meant cotton which reached these ports either for market or passing through them on direct shipments from interior points in the South to points in the Northern States or to foreign countries.

By comparing the receipts at these various ports during the six years ended August 31, 1861, with the receipts during the six years ended August 31, 1879, we find that the shipments of cotton via Galveston increased from 940,479 bales to 2,796,543 bales, an increase of 1,856,064 bales, or 197 per cent.; that the shipments via New Orleans fell from 10,233,140 bales to 7,405,351 bales, a decrease of 2,827,789 bales, or 28 per cent.; that the shipments via Mobile fell from 3,779,491 bales to 2,137,469 bales, a decrease of 1,642,022 bales, or 43 per cent.; that the shipments via Apalachicola fell from 890,479 bales to 144,224 bales, a decrease of 746,255 bales, or 83 per cent.; that the shipments via Savannah increased from 2,473,120 bales to 3,555,156 bales, an increase of 1,082,036 bales, or 44 per cent.; that the shipments via Charleston increased from 2,626,659 bales to 2,719,488 bales, an increase of 92,829 bales, or 3½ per cent.; that the shipments via Wilmington increased from 212,215 bales, to 691,853 bales, an increase of 479,638 bales, or 222 per cent., and that the shipments via Norfolk increased from 237,066 bales to 3,111,425 bales, an increase of 2,874,359 bales, or about 1212 per cent.

It also appears from the foregoing table that there has been a considerable falling off in the receipts of cotton at the Gulf ports, and a very large increase in the receipts at the South Atlantic ports, embracing all ports between Norfolk, Va., and Savannah, Ga. This is shown by comparing the receipts at the Gulf ports and at the South Atlantic ports during the six years ended August 31, 1861, with the receipts at the same ports during the six years ended August 31, 1879:

	Bales.
Receipts at Gulf ports during the six years ended August 31, 1861	15,843,589
Ditto, August 31, 1879	12,483,587
Decrease.....	3,360,002

Showing a decrease of 21 per cent.

	Bales.
Receipts at South-Atlantic ports (from Norfolk to Savannah, inclusive) during the six years ended August 31, 1861.....	5,549,060
Ditto, August 31, 1879	10,077,922
Increase	4,528,862

Showing an increase of 82 per cent.

The decrease in the receipts of cotton at Gulf ports appears to have been due, in part, to the large increase in the overland movement already alluded to and to the increased movement to the South-Atlantic ports.

THE SHIPMENTS OF COTTON VIA GULF PORTS, SOUTH-ATLANTIC PORTS, AND OVERLAND ON RAILROADS CROSSING THE OHIO AND THE UPPER MISSISSIPPI RIVERS.

The shipments of cotton through Gulf ports, through South-Atlantic ports, and overland on all-rail lines are shown as follows for the years ended August 31, from 1855 to 1879, inclusive:

Cotton shipments.

Year ended August 31.—	Via Gulf ports.	Via South-Atlantic ports, in the States of Virginia, North Carolina, South Carolina, and Georgia.	Overland, by rail lines crossing the Ohio and Up- per Mississippi Rivers.
1855	1,904,573	935,105	7,661
1856	2,581,653	931,977	14,215
1857	2,164,403	770,362	4,754
1858	2,366,410	737,928	9,624
1859	2,739,226	1,026,934	85,321
1860	3,427,585	1,133,509	108,676
1861	2,564,312	948,350	143,424
1862*			
1863*			
1864*			
1865*			
1866	1,465,223	475,006	258,753
1867	1,185,593	577,338	256,340
1868	1,103,692	941,620	393,583
1869	1,186,035	733,214	439,800
1870	1,717,316	997,214	350,416
1871	2,186,915	1,513,661	560,501
1872	1,462,885	1,050,406	342,186
1873	1,930,359	1,483,674	402,296
1874	1,924,506	1,627,822	497,083
1875	1,693,862	1,561,972	461,751
1876	2,296,705	1,578,159	703,780
1877	2,085,676	1,673,852	636,886
1878	2,294,231	1,720,146	693,640
1879	2,188,607	1,915,971	891,619

* No record.

Of the total movement of cotton during the year ended August 31, 1860, 73.4 per cent. was by the way of Gulf ports, 24.3 per cent. by the way of South Atlantic ports, and 2.3 per cent. by the overland movement, and of the *total movement of cotton* during the year ended August 31, 1879, 44 per cent. was by the way of Gulf ports, 38 per cent. by the way of South-Atlantic ports, and 18 per cent. by the overland movement.

By comparing the shipments during the six years from 1856 to 1861, inclusive, with the shipments during the last six years—1874 to 1879, inclusive—we find that there was a falling off of the shipments via Gulf ports from 15,843,589 bales to 12,483,587 bales, a decrease of 21 per cent.; that there was an increase in the movement via South-Atlantic ports from 5,549,060 bales to 10,077,922 bales, an increase of 4,528,862 bales, or 82 per cent., and that there was an increase in the overland movement from 366,014 bales to 3,884,759 bales, an increase of 3,518,745 bales, or 961 per cent.

**COTTON REQUIRED FOR MANUFACTURE BY NORTHERN MILLS AND BY
SOUTHERN MILLS.**

The following table shows the quantity of cotton taken for consumption in the United States by Northern mills and by Southern mills each year during the last decade, and during each of the two preceding decennial years:

Cotton taken by Northern mills and by Southern mills.

Years.	By Northern mills.	By Southern mills.	Total
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1849-'50	475,702	87,067	562,769
1859-'60	786,521	178,107	964,628
1869-'70	806,890	90,000	896,890
1870-'71	1,008,956	91,240	1,100,196
1871-'72	977,540	120,000	1,097,540
1872-'73	1,063,465	137,662	1,201,127
1873-'74	1,177,417	128,526	1,305,943
1874-'75	1,062,522	145,079	1,207,601
1875-'76	1,211,598	145,000	1,356,598
1876-'77	1,288,418	147,000	1,435,418
1877-'78	1,398,298	148,000	1,546,298
1878-'79	1,416,960	152,000	1,568,960

The quantity taken by Northern mills increased from 786,521 bales in 1860 to 1,416,960 bales in 1879, an increase of 80 per cent., and the quantity taken by Southern mills fell from 178,107 bales in 1860 to 152,000 bales in 1879, a decrease of 15 per cent.

The cotton crop of the United States for the year ended August 31, 1879, was only 5 per cent. greater than the crop of the year ended August 31, 1860, but the requirements of mills in the United States increased from 964,628 bales in 1860 to 1,568,960 bales in 1879, an increase of 604,332 bales, or 63 per cent.

THE NORTHERN MOVEMENT OF COTTON.

The Northern movement of cotton, showing separately the quantity taken by Northern spinners, and the quantity shipped North and thence exported to foreign countries, is shown as follows:

Northern movement of cotton for the commercial years ended August 31.

Year ended August 31—	Taken by North- ern spinners.	Shipped North and exported.	Total Northern movement.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1832.....	592, 074		
1833.....	660, 009		
1834.....	598, 485		
1835.....	573, 843		
1836.....	631, 991		
1837.....	683, 597		
1838.....	452, 185		
1839.....	760, 218		
1840.....	786, 521	213, 271	999, 792
1841.....	650, 357	278, 612	928, 969
1842-45.....	No record.		
1846.....	587, 292	516, 220	1, 103, 512
1847.....	656, 307	497, 947	1, 154, 254
1848.....	825, 015	396, 732	1, 221, 747
1849.....	918, 806	350, 547	1, 269, 353
1850.....	806, 890	447, 540	1, 254, 430
1851.....	1, 008, 956	710, 385	1, 719, 341
1852.....	977, 540	402, 771	1, 380, 311
1853.....	1, 063, 465	614, 942	1, 678, 407
1854.....	1, 177, 417	581, 591	1, 759, 008
1855.....	1, 062, 522	552, 519	1, 615, 041
1856.....	1, 211, 598	621, 966	1, 833, 564
1857.....	1, 288, 418	573, 043	1, 861, 461
1858.....	1, 398, 298	623, 006	2, 021, 304
1859.....	1, 416, 960	617, 036	2, 033, 996

This table shows that the northern movement increased from 1,103,512 bales in 1866 to 2,033,996 bales in 1879, an increase of 930,484 bales, or 84 per cent.

The total northern movement during the crop year of 1878-'79, as represented by takings of northern spinners and by the shipments to the northern ports for exportation, was as follows:

Taken by northern spinners.....	Bales. 1, 416, 960
Shipped north and thence exported.....	617, 036
Total northern movement.....	2, 033, 996

The northern movement during the year ended August 31, 1879, constituted 40 per cent. of the crop; the overland portion of that movement during the same year constituting 17.6 per cent. of the crop.

THE EXPORTATION OF COTTON TO FOREIGN COUNTRIES.

The following table shows the quantity of cotton exported to Great Britain and Ireland, France, and to all other foreign countries during each commercial year ending August 31, from 1870 to 1879, and during the two preceding decennial years.

Cotton exported.

Year ending August 31—	To Great Britain and Ireland.	To France.	To all other countries.	Total cotton exported.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1849-'50	1, 106, 771	289, 627	193, 757	1, 590, 155
1859-'60	2, 669, 432	589, 587	515, 154	3, 774, 173
1869-'70	1, 474, 695	346, 450	357, 772	2, 178, 917
1870-'71	2, 367, 440	138, 703	660, 599	3, 166, 742
1871-'72	1, 454, 512	184, 055	318, 747	1, 957, 314
1872-'73	1, 905, 566	252, 903	521, 517	2, 679, 986
1873-'74	1, 867, 936	370, 865	602, 180	2, 840, 981
1874-'75	1, 893, 708	359, 699	431, 301	2, 684, 708
1875-'76	2, 080, 711	456, 872	715, 411	3, 252, 994
1876-'77	2, 024, 877	466, 704	557, 916	3, 049, 497
1877-'78	2, 036, 732	495, 499	814, 409	3, 346, 640
1878-'79	2, 058, 514	419, 005	090, 046	3, 467, 565

The official statements, published by the Bureau of Statistics, of the cotton exports of the United States during each year ended June 30, from 1870 to 1879, and during each of the two preceding decennial years is as follows :

Year.	To Great Britain and Ireland.	To France.	To Germany.	To all other countries.	Total.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1849-'50	431, 531, 091	125, 834, 091	38, 552	77, 977, 870	635, 381, 004
1859-'60	1, 264, 136, 782	283, 967, 334	66, 072, 526	153, 509, 606	1, 767, 686, 338
1869-'70	649, 165, 778	153, 146, 501	86, 775, 850	69, 470, 394	958, 558, 523
1870-'71	1, 102, 322, 343	59, 611, 304	103, 986, 223	197, 008, 154	1, 462, 928, 024
1871-'72	703, 914, 765	88, 187, 183	42, 516, 604	98, 918, 861	933, 537, 413
1872-'73	858, 649, 331	113, 370, 036	96, 342, 287	132, 701, 876	1, 200, 063, 530
1873-'74	903, 571, 772	177, 365, 583	114, 613, 646	163, 051, 302	1, 358, 602, 303
1874-'75	911, 941, 759	155, 139, 454	75, 284, 980	118, 052, 710	1, 260, 418, 903
1875-'76	957, 329, 739	203, 975, 759	108, 545, 768	221, 554, 068	1, 491, 405, 334
1876-'77	1, 020, 365, 436	219, 088, 761	77, 605, 283	128, 309, 650	1, 445, 369, 130
1877-'78	1, 039, 948, 425	236, 030, 981	121, 649, 103	209, 905, 002	1, 607, 533, 511
1878-'79	983, 774, 508	196, 988, 105	137, 484, 413	310, 125, 807	1, 628, 372, 833

It appears that during the last nine years 68.4 per cent. of the exports of cotton was to Great Britain and Ireland, 11.7 to France, 7.1 to Germany, and 12.8 to other countries.

The proportion taken by the United Kingdom declined from 67.9 per cent. in 1849-'50 to 60.4 in 1878-'79; that of France from 19.8 to 12.1 per cent.; Germany increased from 3.7 per cent. in 1859-'60 to 8.4 per cent. in 1878-'79; all other countries from 8.7 to 19 per cent.

The exports of cotton to Germany increased from 66,072,526 pounds in 1859-'60 to 137,484,413 in 1878-'79, while the exports to Great Britain and Ireland and France were much less in 1878-'79 than in 1859-'60.

EXPORTS OF COTTON FROM NORTHERN AND FROM SOUTHERN PORTS.

The following table, showing the exportation of cotton from northern and from southern ports, has been compiled from the annual reports of the commerce and navigation of the United States. By "northern ports" is meant all ports north of the mouth of the Potomac River, and by "southern ports" all ports south of the mouth of that river.

Exports of cotton from northern ports and from southern ports of the United States from 1856 to 1879.

[Compiled from the annual reports on commerce and navigation.]

Year ended June 30—	From northern ports.	From southern ports.	Total.	Per cent. from northern ports.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	
1856.....	118,912,547	1,232,520,154	1,351,432,701	8
1857.....	83,873,594	964,408,881	1,048,282,475	8
1858.....	68,962,951	1,049,663,061	1,118,626,012	7
1859.....	73,816,492	1,312,652,070	1,386,468,562	5
1860.....	108,071,273	1,659,615,065	1,767,686,338	6
1861.....	132,129,436	175,386,663	307,516,099	.....
1862.....	5,064,564	.....	5,064,564	.....
1863.....	9,522,624	1,862,362	11,384,986	.....
1864.....	9,801,456	2,192,455	11,993,911	.....
1865.....	6,056,495	550,671	6,607,166	.....
1866.....	No report.	.....	.....	.....
1867.....	196,585,659	464,887,929	661,473,588	29
1868.....	169,308,984	615,454,649	784,763,633	21
1869.....	138,059,024	506,268,897	644,327,921	21
1870.....	194,118,376	764,440,147	958,558,523	22
1871.....	321,037,284	1,141,890,740	1,462,928,024	22
1872.....	177,279,756	756,257,657	933,537,413	19
1873.....	368,553,787	931,509,743	1,299,063,530	22
1874.....	284,552,703	1,074,049,600	1,358,602,303	21
1875.....	271,023,367	989,395,536	1,260,418,903	21
1876.....	260,676,353	1,230,728,981	1,491,405,334	17
1877.....	285,827,653	1,159,541,477	1,445,369,130	20
1878.....	306,654,911	1,302,878,600	1,609,533,510	18
1879.....	287,762,030	1,340,610,803	1,628,372,833	18

* No accurate reports were received or kept, owing to the rebellion..

It appears that during the five years from 1856 to 1860, inclusive, 6.8 per cent. of the total exports of cotton from the United States was from northern ports and 93.2 from southern ports, and that during the ten years from 1870 to 1879, inclusive, 19.9 per cent. of the exports of cotton was from the northern ports and 80.1 from the southern ports.

COTTON REQUIRED FOR HOME MANUFACTURES AND FOR EXPORTATION TO FOREIGN COUNTRIES.

The following table exhibits the proportion of each cotton crop taken by home manufacturers, and exported to foreign countries during the years ended August 31, from 1870 to 1879, and during each preceding decennial year:

Year ended August 31—	Taken by home manufacturers.	Exported to for- eign countries.
	<i>Bales.</i>	<i>Bales.</i>
1850.....	562,769	1,590,155
1860.....	964,628	3,774,173
1870.....	896,890	2,178,917
1871.....	1,100,196	3,166,742
1872.....	1,097,540	1,957,314
1873.....	1,201,127	2,679,986
1874.....	1,305,943	2,840,981
1875.....	1,207,601	2,684,708
1876.....	1,356,598	3,252,994
1877.....	1,435,418	3,049,497
1878.....	1,546,298	3,346,640
1879.....	1,568,960	3,467,565

It appears from the foregoing table that the consumption of cotton by home manufacturers has increased more rapidly than the exportation of cotton to foreign countries. During the year ended August 31, 1850, there was taken by home manufacturers 26 per cent. and exported 74 per cent. of the cotton crop; during the year 1860, there was taken by home manufacturers 20 per cent. and exported 80 per cent. of the cotton crop; during the year 1870, there was taken by home manufacturers 29 per cent. and exported 71 per cent. of the cotton crop; and during the year 1879, there was taken by home manufacturers 31 per cent. and exported 69 per cent. of the cotton crop of that year.

THE COTTON-TRADE OF THE UNITED KINGDOM.

The United Kingdom is the chief market for American cotton. The amount imported into that kingdom from the United States and from all countries is shown in the following table:

Cotton imported into Great Britain and Ireland from 1840 to 1878, inclusive, from all countries and from the United States separately (from official records).

Year.	Total imports.	Imports from United States.	Per cent. from United States.	Year.	Total imports.	Imports from United States.	Per cent. from United States.
	<i>Pounds.</i>	<i>Pounds.</i>			<i>Pounds.</i>	<i>Pounds.</i>	
1840.....	592,488,010	487,856,504	82.3	1860.....	1,390,938,752	1,115,890,608	80.2
1841.....	487,992,355	358,240,964	73.4	1861.....	1,256,984,736	819,500,528	65.2
1842.....	531,750,086	414,030,779	77.8	1862.....	523,973,296	13,524,224	2.6
1843.....	673,193,116	574,738,520	85.3	1863.....	679,084,128	6,394,080	1.0
1844.....	646,111,304	517,218,622	80.0	1864.....	894,102,384	14,198,688	1.6
1845.....	721,979,952	628,650,412	86.8	1865.....	978,502,000	135,832,480	13.9
1846.....	467,856,274	401,949,393	85.8	1866.....	1,377,514,096	520,061,136	37.7
1847.....	474,707,615	364,599,291	76.8	1867.....	1,262,885,904	528,166,800	41.8
1848.....	713,020,161	600,247,488	84.2	1868.....	1,328,761,616	574,478,016	43.2
1849.....	755,469,012	634,504,050	78.7	1869.....	1,221,571,232	457,358,944	37.4
1850.....	663,576,861	493,153,112	74.3	1870.....	1,339,367,120	716,248,848	53.5
1851.....	757,379,749	596,638,962	78.7	1871.....	1,778,139,776	1,038,677,920	58.4
1852.....	929,782,448	765,630,544	82.3	1872.....	1,408,837,472	625,600,080	44.4
1853.....	895,278,749	658,451,796	73.5	1873.....	1,527,596,224	832,573,616	54.5
1854.....	887,333,149	722,151,346	81.4	1874.....	1,568,864,432	874,926,864	55.8
1855.....	891,751,952	681,629,424	76.4	1875.....	1,492,351,168	841,333,472	56.3
1856.....	1,023,886,304	780,040,016	76.2	1876.....	1,487,858,848	932,800,176	62.7
1857.....	969,318,896	654,758,048	67.5	1877.....	1,355,281,200	912,244,592	67.3
1858.....	1,034,342,176	833,237,776	80.5	1878.....	1,340,380,048	1,028,190,928	76.5
1859.....	1,225,989,072	961,707,264	78.4				

The foregoing table exhibits a very large increase in the imports into Great Britain and Ireland from the United States. Comparing the imports into that country during the five years from 1856 to 1860 with the imports during the five years from 1874 to 1878, it appears that there was an increase from 5,644,475,200 pounds to 7,242,735,696 pounds, an increase of 1,598,260,496 pounds, or 28.3 per cent. During the year 1868, only 43.2 per cent. of the total imports of cotton into Great Britain and Ireland was imported from the United States, but during the year 1878, there was imported from the United States 76.5 per cent. or very nearly as large a proportion of the total imports of cotton into that country as during the ten years ending with the year 1860, during which period 77.7 per cent. of the total imports into Great Britain and Ireland was from the United States.

In the Appendix will be found a table prepared by Mr. Thomas Ellison, of Liverpool, England, a gentleman recognized in all parts of the world as a leading authority in regard to the production and consumption of cotton. This table shows the annual average production of cotton in the principal cotton-growing countries of the globe, and the annual average consumption thereof in Europe and in America, both being presented in periods of five years.

16. THE RESULTS OF THE FACILITIES AFFORDED FOR DIRECT SHIPMENTS OVER CONNECTING LINES, AS ILLUSTRATED BY FACTS IN REGARD TO THE POINTS AT WHICH PURCHASES ARE MADE BY MERCHANTS DOING BUSINESS AT TOWNS SITUATED WEST OF THE MISSISSIPPI RIVER.

The facilities afforded by the railroad companies for direct transport between distant points, and the struggles which have ensued for a share of the competitive traffic developed by such facilities, have had the effect of greatly extending and intensifying the competition between all the important trade centers of the country. Merchants doing business at towns situated in the more remote Western States have thereby had presented to them the option of direct trade with Saint Louis, Chicago, Toledo, Detroit, Cincinnati, Buffalo, and Pittsburgh, and with each one of the principal Atlantic seaports. They may also purchase goods at almost all the principal manufactories of the country, such goods being shipped to them directly by rail on through bills of lading. By virtue of this fact, the relations sustained by the railroads to the commercial interests of the various centers of trade have become a subject of vital interest.

The facts here presented are the result of efforts which have been made to collect data at various points in the States west of the Mississippi River, for the purpose of showing the proportion of goods purchased by merchants of those States at Chicago, at Saint Louis, and at Atlantic seaports.

The information obtained by this office in regard to such purchases has been furnished by merchants doing business at Kansas City, Mo., at Omaha, Nebr., and at Clinton, Burlington, Fort Dodge, Dubuque, and Cedar Rapids, Iowa, in reply to the following inquiries:

INQUIRIES.

About what proportion of the total value of your purchases of merchandise is made through wholesale or jobbing houses?

1. At Saint Louis?
2. At Chicago?
3. At Atlantic seaports?

If it be inconvenient for you to state the proportion purchased at Saint Louis and at Chicago separately, will you please to state what proportion of the total value of your purchases of merchandise is made at Chicago and at Saint Louis together, and what proportion at Atlantic seaports?

Of the total value of your purchases at Atlantic seaports, about what proportion was made at New York?

Please also to state what proportion of your total purchases is made at manufactories, and the location of such manufactories.

Please to state whether your business is wholesale or retail, or both wholesale and retail.

Are all of your goods shipped to you directly on through bills of lading from the manufactories or points where purchased?

Please also to add any remarks which you may deem pertinent to this subject.

DUBUQUE, IOWA.

The following information as to the points at which merchandise is purchased by merchants of Dubuque, Iowa, was furnished by Mr. D. E. Lyon, surveyor of customs at that point. It has been deemed proper to omit here the names of the parties furnishing the information.

Statement of Mr. ———, wholesale grocer.

Total sales, \$800,000 per annum. Three per cent. of purchases made at Saint Louis of manufacturers; 20 per cent. at Chicago, of manufacturers; and 77 per cent. of manufacturers and importers.

Statement of Messrs. ———, wholesale jobbers in groceries.

Sales, \$700,000 per annum. Five per cent. of our purchases are made at Saint Louis, of manufacturers; 25 per cent. at Chicago and Cincinnati, of importers and manufacturers; and 70 per cent. of refiners and manufacturers at Atlantic seaports, of which 50 per cent. were made at New York City.

Statement of Messrs. ———, wholesale jobbers in dry goods.

Total purchases, \$350,000 per annum. Purchased in New York, \$300,000. No purchases are made at Saint Louis, and none at Chicago, except small items in filling an order. All purchases are made of agents and manufacturers at Atlantic seaports and interior towns in the Atlantic States.

Statement of Mr. ———, wholesale cloth and clothier.

Annual sales, \$600,000. All purchases are made in New York City, of commission merchants and manufacturers.

Statement of Messrs. ———, wholesale jobbers in iron and hardware.

Annual sales, \$550,000. Ten per cent. of purchases are made at Saint Louis, 10 per cent. at Chicago, and 30 per cent. at Atlantic seaports. About 50 per cent. are purchased of manufacturers at New York City.

Statement of Messrs. ———, wholesale jobbers of woollens, furnishing goods, &c.

Sales, \$350,000 per annum. No purchases made at Saint Louis or Chicago. Ninety-five per cent. of purchases are made in New York of commission houses and manufacturers, and 5 per cent. are made at other Atlantic ports.

In connection with the foregoing statements, Mr. Lyon says:

I learn, upon inquiry, from the merchants who gave the statements in question, that in all cases, goods purchased by them are shipped directly by rail on through bills of lading to Dubuque from the points where purchased. Very often these goods pass over the New York canals, and through the lakes to Chicago or Milwaukee, and thence by rail to this city. This is done because cheaper transportation is had than by all rail. When this mode is not adopted, goods come in on some fast freight line. From the East to Chicago, freights can be had by them at competitive rates. From Chicago to Dubuque, because of combination, nearly local rates obtain.

Dubuque merchants carry on an extensive wholesale jobbing trade. The salesmen go into Nebraska, Dakota, Kansas, Minnesota, Wisconsin, and a small portion of Illinois and all over Iowa.

You will observe that nothing, in fact, is bought from wholesale jobbers by these merchants who answer the questions. They buy from the same parties that the jobbers in Atlantic ports buy from, and their traveling men compete side by side with those from eastern cities.

There is a smaller class of merchants who buy from these jobbers.

We have one grocery house here that imports nearly all its tea; a hardware house that takes all the nails made by a large nail factory; a crockery house that takes all the glass made by a glass manufactory, &c. Hence you will see that our jobbers conduct their business the same as eastern jobbers do—buy of first hands—but do less business.

Consumers in Dubuque buy goods to-day cheaper than you do in Washington. I can buy muslin here at $\frac{1}{2}$ cent a yard advance from manufacturer's prices. This is because our merchants buy from first hands, thereby cutting off other profits.

I think you will find as true that, after all, it is the country merchants who buy from the jobbers, and that all large jobbers, east and west alike, buy from commission houses, importers, and manufacturers. Where the term, "commission houses" is used, it in fact implies manufacturers.

KANSAS CITY, MO.

The following information as to the points at which merchandise is purchased by merchants of Kansas City, Mo., has been furnished by Mr. W. H. Miller, secretary and treasurer of the board of trade of that city:

Statement of Messrs. ———, druggists.

Twenty-five per cent. of our purchases are made at Saint Louis, and 75 per cent. at Atlantic seaports, almost all of which are made at New York.

Statement of Messrs. ———, dealers in boots and shoes.

All purchases are made of manufacturers in New England.

Statement of Messrs. ———, dealers in liquors, wines, &c.

Eight to ten per cent. of purchases are made at Saint Louis, and 5 per cent. at New York—none at Chicago. The principal part of our wine is purchased in California and the larger part of our distilled liquors is purchased of manufacturers.

Statement of Messrs. ———, dealers in clothing.

All our purchases are made at Atlantic seaports, about two-thirds being made at New York.

Statement of Messrs. ———, dealers in hardware.

About one-fourth of our purchases are made at Saint Louis, and about one-fourth at Atlantic seaports, of which about one-half are made at New York. We buy largely at Pittsburgh and Wheeling.

Statement of Messrs. ———, dealers in hats.

Nearly all our purchases are made at Atlantic seaports, one-half of which are made at New York. All goods bought of manufacturers or their agents.

Statement of Messrs. ———, grocers.

Twenty-five per cent. was purchased at Saint Louis; 15 per cent. at Chicago, and 60 per cent. at Atlantic seaports, of which one-half was purchased at New York.

Statement of Messrs. ———, dealers in hardware and leather.

Very little purchased at Saint Louis, Chicago, or Atlantic seaports. Our purchases are made almost exclusively of manufacturers in Kentucky, Pennsylvania, New York, New Jersey, and Connecticut.

Statement of Messrs. ———, dealers in dry goods.

Ninety per cent. of our purchases are made at Atlantic seaports, 70 per cent. of which are made at New York.

Statement of Messrs. ———, dealers in liquors.

Five per cent. purchased at Saint Louis, 10 per cent. at Chicago, and 15 per cent. at Atlantic seaports. We buy principally of manufacturers in Kentucky, &c.

BURLINGTON, IOWA.

The following information as to the points at which merchandise is purchased by merchants of Burlington, Iowa, has been furnished by Mr. George Frazee, surveyor of customs at that point :

Statement of Messrs. ———, dealers in dry goods.

No purchases at Saint Louis ; 10 per cent. at Chicago, and 70 per cent. at Atlantic seaports. Of the total purchases at Atlantic seaports, 50 per cent. were made at New York. About 20 per cent. of all our purchases were made of manufacturers—one-half eastern and one-half western manufacturers. All goods shipped direct by rail on through bills of lading.

Statement of Messrs. ———, dealers in dry goods, notions, &c., wholesale and retail.

No purchases at Saint Louis ; about 7 per cent. are made at Chicago, and 93 per cent. at New York, through agents. All goods shipped direct by rail from place of purchase.

Statement of Mr. ———, dealer in dry goods, carpets, &c.

About 5 per cent. of purchases are made at Saint Louis and Chicago, and about 70 per cent. at Atlantic seaports, of which 65 per cent. were at New York. Goods are shipped direct by rail on through bills of lading.

Statement of Messrs. ———, wholesale grocers.

Ten per cent. of purchases are made at Saint Louis, 7 per cent. at Chicago, and 58 per cent. at Atlantic seaports, 47 per cent. of which are made at New York ; 25 per cent. are purchased of manufacturers at various places. All goods sent direct.

Statement of Messrs. ———, wholesale and retail dealers in drugs, medicines, oils, paints, and liquors.

Fifteen per cent. of purchases are made at Saint Louis, 15 per cent. at Chicago, and 70 per cent. at Atlantic seaports, of which 50 per cent. were made at New York. All goods shipped directly.

Statement of Messrs. ———, wholesale dealers in hardware and tinners' stock.

About 10 per cent. of our purchases are made at Saint Louis, none at Chicago, and 5 per cent. at Atlantic seaports ; 95 per cent. of purchases are made from manufacturers at Pittsburgh, Wheeling, Chicago, and Saint Louis, and at some 50 or 60 small manufacturing towns in the New England States. As a rule all goods are shipped directly by rail on through bills of lading.

Statement of Mr. ———, wholesale dealer in boots and shoes.

No purchases made at Saint Louis nor Chicago. All purchases made from manufacturers, chiefly in Massachusetts. Goods shipped by rail on through bills of lading, mostly from Boston.

FORT DODGE, IOWA.

The following information as to the points at which merchandise is purchased by merchants of Fort Dodge, Iowa, has been furnished by the Hon. C. C. Carpenter, of that city :

Statement of ———, retail dealer in boots and shoes, leather, findings, &c.

About two-thirds of our purchases are made direct from manufacturers in the States of Wisconsin, Michigan, Illinois, New York, Pennsylvania, Massachusetts, and New Jersey, and there is scarcely a Northern State in which purchases are not made in some small degree at least. The percentage of stock purchased in Chicago, Saint Louis, and Atlantic seaports is so small that it would be useless to give the amount. All goods are shipped to us by rail direct on through bills of lading from the points where purchased.

Statement of Mr. ———, dealer in dry goods and clothing.

Three-fourths of our purchases are made at Saint Louis and Chicago, and one-fourth at Atlantic seaports. About one-eighth of purchases are made of manufacturers. All goods are shipped direct on through bills of lading.

CLINTON, IOWA.

The following information as to the points at which merchandise is purchased by merchants of Clinton, and Cedar Rapids, Iowa, has been furnished by Col. Milo Smith, of the former city :

Statement of Mr. ———, wholesale and retail druggist.

Fifteen per cent. of our purchases are made at Saint Louis, 50 per cent. at Chicago, and 5 per cent. at Atlantic seaports, of which nearly all are at New York. The remainder are purchased at Pittsburgh, Cleveland, and Detroit. Goods are mostly shipped by rail, on through bills of lading.

Statement of Messrs. ———, wholesale and retail dealers in dry goods.

None of our purchases are made at Saint Louis. About 50 per cent. are purchased at Chicago, and 50 per cent. at Atlantic seaports, of which three-fourths are at New York. About one-eighth are purchased of Western manufacturers. All goods are shipped on through bills of lading from point of purchase.

Statement of Messrs. ———, wholesale and retail dealers in dry goods.

About 5 per cent. of our purchases are made at Saint Louis, and 95 per cent at Atlantic seaports, mostly at New York. Goods are re-billed at Chicago.

Statement of Messrs. ———, wholesale and retail dealers in hardware, wagon stock, &c.

About one-third of our purchases are made respectively at Saint Louis, at Chicago, and at Atlantic seaports. About two-thirds of our purchases are made of manufacturers. Annual purchases from \$125,000 to \$150,000. As a rule, all goods are shipped on through bills of lading from the place of purchase.

Statement of Messrs. ———, dealers in dry goods.

No purchases are made at Saint Louis; 35 per cent. of purchases are made at Chicago, and 65 per cent. at Atlantic seaports, of which 75 per cent. were made at New York. About 20 per cent. of purchases are shipped on through bills of lading. The remainder is re-billed at Chicago.

Statement of Messrs. ———, dealers in groceries.

One-third of our purchases are made at Chicago and two-thirds at Atlantic seaports. Of the latter, 50 per cent. are made at New York. Almost all goods are shipped to us direct by rail, on through bills of lading.

Statement of Messrs. ———, wholesale and retail grocers.

Purchases from \$50,000 to \$75,000 per annum. Ten per cent. of purchases are made at Saint Louis, 80 per cent. at Chicago, and 10 per cent. at New York. Twenty per cent. of our purchases are made of manufacturers, mostly at New York and Chicago. Our goods are mostly re-billed at Chicago.

CEDAR RAPIDS, IOWA.

Statement of Messrs. ———, dealers in dry-goods.

Eight per cent. of our purchases are made at Chicago, and 90 per cent. at New York. About 2 per cent. of our purchases are made of manufacturers, chiefly western.

Statement of Mr. ———, dealer in dry goods.

Ninety per cent. of our purchases are made at New York and Boston. Goods shipped to us direct by rail, on through bills of lading.

OMAHA, NEBR.

The following information as to the point at which merchandise is purchased by merchants of Omaha, Nebr., has been furnished by Mr. John Campbell, surveyor of customs at that point:

Statement of Messrs. ———, wholesale boot and shoe dealers.

Purchase nothing at either Chicago or Saint Louis, and nearly all at Atlantic seaports.

Statement of Messrs. ———, wholesale grocers.

Twenty per cent. of our purchases were made last year at Saint Louis, 13.3 per cent at Chicago, and 66.7 per cent. at Atlantic seaports. Total amount of purchases, \$750,000.

Statement of Messrs. ———, wholesale dry goods and notions.

Only 1 per cent of purchases made at Chicago and 99 per cent. at Atlantic seaports.

Statement of Mr. ———, wholesale dealer in dry goods.

Twelve and a half per cent. purchased at Saint Louis, 12½ per cent. at Chicago, and 75 per cent. at Atlantic seaports.

Statement of Messrs. ———, dry goods, &c.

Two per cent. purchased at Chicago and 98 per cent. at Atlantic seaports; 95 per cent. at New York.

Statement of Messrs. ———, dealers in toys, notions, and fancy goods.

Seventy-five per cent. purchased at New York, and 25 per cent. at other Atlantic seaports.

Statement of Messrs. ———, dealers in groceries.

Five per cent. purchased at Saint Louis, 5 per cent. at Chicago, 50 per cent. at New York, and 40 per cent. at other Atlantic seaports.

Attention is called to the valuable statement by Mr. George Frazee, surveyor of customs at the port of Burlington, Iowa, in regard to the course, and the conditions governing, the trade of the Northwestern States. (Appendix, pp. 167 to 171, inclusive.)

It is impossible from the foregoing data to state with any degree of precision the relative amount of the entire merchandise consumed in the Northwestern States, which is purchased at Chicago, at Saint Louis, and at New York, and other Atlantic seaports respectively. The information which has been furnished relates chiefly to the larger dealers at the principal towns, the most of them being engaged in a jobbing or wholesale business. In order to ascertain even approximately the proportion of goods purchased in the several cities respectively, it would be necessary to obtain from many retailers in those States data as to the points at which their purchases are made. Some of these retailers purchase of the jobbers at the large towns west of the Mississippi River; others purchase at Chicago and at Saint Louis, and others at New York and other Atlantic seaports, and also at manufactories throughout the North Atlantic and the Western States.

The facts presented clearly show that the merchants throughout the Northwestern States are able to avail themselves of all the advantages of competition between rival centers of trade and rival manufacturers in various parts of the country, through the facilities which have been provided for direct traffic over connecting railroads. Such advantages, of course, accrue mainly to the consumers of merchandise. So great is this competition between rival railroads that in many cases, in the far Western States, the people not only enjoy the benefits of cheaper transportation of their surplus products to the seaboard and to foreign markets, but also the advantage of having to pay no higher prices for general merchandise than are paid in many parts of the Atlantic seaboard States in which the goods are manufactured.

The data thus presented as to the points at which merchandise is purchased, and the manner in which it is shipped by western merchants, conveys a clear idea of the magnitude and importance of direct shipments over connecting rail lines on through bills of lading, and of the remarkable changes which have taken place in the conditions governing the internal commerce of the country as a result of the competition between rival centers of trade, and between rival lines of transportation.

The facilities for direct trade have also begotten an extensive competition between rival markets; the inevitable tendency being towards a parity of values, and towards regulating freight charges.

The foregoing facts constitute but an introduction to an attempt to explain the advantages of the facilities which now exist for direct shipments over connecting railroads on through bills of lading.

PART II.



THE RELATIONS OF THE RAILROADS TO THE PUBLIC INTERESTS.

The following chapters in regard to direct trade over connecting lines, competition, the apportionment of traffic, the cost of transportation, uniformity of railroad accounts, the publicity of the acts and doings of railroad companies, discriminations, and the governmental regulations of railroads, have a direct bearing upon the relation of the railroads to the public interests. The main object in view in the preparation of these statements has been to describe the evils which have sprung up in the course of the development of the railroad system, and the measures which have been proposed or adopted for the correction of such evils. The topics treated embrace the more important features of what is known as "the railroad problem."

1. DIRECT TRADE OVER CONNECTING LINES.

The arrangements which have been entered into between connecting railroads for the direct transmission of freights between distant points without the necessity of any supervision on the part of the shipper from the point of shipment to the point of delivery, constitute one of the most important features of our railroad system. The efficiency of railroads as instruments of commerce is due in a higher degree to such combinations than to any other feature of their existence.

It is especially in the light of the relationships which the railroads of the country sustain to each other by virtue of these arrangements, that they may be regarded as constituting one great system of transportation.

As railroads were extended from the Atlantic seaboard towards the West, it became evident to their managers that the methods pursued in the conduct of local traffic were inadequate to the proper conduct of through traffic over connecting lines. It was not, however, until after certain practices with respect to the latter had been established, that uniform rules could be formulated for its systematic management.

The efforts made by railroad managers for the purpose of securing traffic from connecting roads, were the steps which inevitably led to the existing condition of our railroad system of transportation. Soon after a general freight traffic over railroads connecting the West with the seaboard began to be developed, the managers of certain of these roads forming continuous lines, saw that they could conduct their through traffic much more economically, and at the same time promote its

growth, by providing facilities for the direct transport of merchandise from points of shipment to points of delivery on through bills of lading, covering the entire freight charges on the different roads, the managers of the connecting roads agreeing among themselves as to the proportion of the through rate which each should receive. The lines affording such facilities also met a pressing commercial demand, and at once commanded public patronage.

The managers of roads which were operated independently of their connections clearly saw that it was impossible for them longer to maintain such an isolated position. They, therefore, earnestly set about imitating their rivals by entering into combinations with connecting roads, for the purpose of securing a share of the through traffic. A struggle for competitive traffic at once began, and has continued to the present time. In the course of this struggle, "through" or "competitive" rates have been greatly reduced, and in many cases to such an extent as to cause discriminations against "local" or "non-competitive" traffic. The reductions made in transportation charges have, however, been of vast importance in developing the resources of the country, in promoting trade and all productive industries, and in the general advancement of the social and material interests of the people.

The great struggle for competitive traffic has also stimulated inventors and railroad managers to the adoption of those improvements in appliances and in methods which have effected cheap and rapid transportation.

The system of direct shipments over connecting roads embraces many matters of detail touching the use of tracks and of cars, and the employment of the necessary executive, clerical, and other assistance. For the accommodation of this through or joint traffic, union depots have been constructed, the tracks of different companies have been connected, and facilities have been provided for the speedy and economical transfer of goods from the cars of one company to those of another.

The principal part of this direct traffic is carried on by means of cars passing over the various connecting roads from points of shipment to points of delivery. This is effected mainly by means of co-operative freight lines, each one of the several connecting companies setting apart a certain number of cars for this particular branch of their freight traffic. Arrangements have also been entered into as to the facilities for speedy transit which shall be granted to through-freight cars and through-freight trains in their passage over the lines of the several companies.

Facilities for the direct shipment of freight now extend into almost every part of the country, and constitute, apart from the conduct of the local traffic of the various roads, a highly-organized system of transportation, a system which has been developed through the teachings of experience and the exercise of the highest order of talent available in the conduct of railroad affairs.

While the managers of the railroads of the country have, under the stimulus of a desire to develop and increase the traffic of their respective

roads, constantly labored to improve the facilities for direct and speedy transportation, their efforts have at the same time tended to meet the pressing demands of the growing and continually widening internal commerce of the country. Thus there has been a constant tendency towards that almost perfect system of transmission which we enjoy in the railway postal service.

All compacts between railroad companies in regard to the management of their joint traffic have been entered into voluntarily. No legislative act or provision has ever yet suggested or devised any of the measures or instrumentalities which have been adopted for the establishment of the system. In this matter, so deeply affecting the commercial and industrial interests of the country, the railroads have been a law unto themselves, or rather they have, within the range of their legal rights, followed the leadings of the natural evolution of the railroad system, with no other guide than the promptings of self-interest, and the suggestions of the constantly-extending commerce of a country of vast extent, and almost illimitable resources.

Very many of these compacts are in whole or in part merely verbal agreements, their execution in detail being carried out in pursuance of the customs which have been established among the executive officers of railroads touching the conduct of such traffic. These customs also constitute the daily guide of the subordinate officers and servants of railroad companies.

The only enactment of Congress bearing upon the subject of direct shipments over connecting lines is the statute of July 15, 1866, authorizing railroad companies chartered by the States to connect their roads with railroads of other States so as to form continuous lines for the transportation of passengers and freight to places of destination. This statute, obviously in the interest of commerce, was enacted at the instance of certain railroad companies, moved solely by the object of subserving their own interest. But the demands of trade have led the railroad companies to supply the facilities for carrying into effect such agreements for the conduct of direct traffic over connecting lines, independently of all legislation, and far in advance of any benefits which could possibly have been realized from the enactment of this unique statute or from the possible statutory enactments of any one or of all the States or of the Congress of the United States.

The validity of such compacts appears to be generally sustained by the courts in so far as relates to the protection of the interests of shippers. The struggle for "through traffic" between competing lines being so intense, railroad companies are averse to subjecting the owners of property to the annoyances of litigation on account of damage to, or loss of property in transit, from the fact that any act of this kind would be likely to bring such company into bad repute among shippers; therefore, cases of this sort seldom, if ever, arise. In proportion to the risks assumed and the magnitude of the business carried on, there are few, if

any, business operations—even including those in regard to which legal remedies are clearly defined and easily attainable—in which so little litigation arises as in the conduct of through traffic over connecting railroads.

In the case of through bills of lading issued by managers of certain of the co-operative freight lines, such managers not being officers or servants of any one of the roads entering into the agreement, special questions have arisen as to the nature of the liabilities incurred by the contracting roads in so far as relates to the interests of shippers.

It appears to be clearly determined that the contracting parties are responsible, as between themselves, for the loss of, or damage to, freight in transit, and also for the division of receipts from freight according to the terms of the agreement entered into. It is generally conceded, however, that the agreement as to the continuance of any arrangement entered into between connecting companies for the conduct of joint traffic is one, the specific performance of which cannot be enforced.

It appears, therefore, that the arrangements for the conduct of direct traffic, so highly beneficial, and, in fact, so indispensable to the present order of the commercial, industrial, and social interests of the country, are at all times subject to such voluntary abrogation on the part of the railroads as would, if generally carried into effect, revolutionize the commerce of the country. But such a catastrophe need not be apprehended, as these agreements are based upon the sure foundation of equity, self-interest, and the imperative requirements of commerce.

Besides the combinations entered into between railroad companies for the conduct of through traffic, similar combinations have been entered into between railroad companies and ocean-steamer lines, by means of which direct trade is carried on between interior points in the United States and foreign countries.

Statutes designed to ensure the proper transmission and interchange of traffic over connecting lines constitute one of the most important branches of the railway legislation of Great Britain, and the duty of enforcing the provisions of law upon this subject is one of the most important functions of the British railway commission.

While the establishment of facilities for direct transportation over connecting lines has greatly enlarged the possibilities of railroads as highways of commerce, and has tended greatly to develop trade, it has also produced marked changes in the course of trade and in the conditions governing the internal commerce of the country. Some of the more important results of the establishment of the facilities of direct trade are set forth in other chapters of this report. A few facts illustrative of the practical workings of the system may, however, be noticed in this connection.

(a) The merchants of New York City and of the other Atlantic seaports are, by virtue of the facilities of direct transport, enabled to ship

goods directly to local dealers at points throughout the New England States, the Atlantic seaboard States, the Gulf States, the Western and Northwestern States, and even to the Pacific States. The merchants of Saint Louis, Chicago, Cincinnati, Louisville, and many other interior points also enjoy similar privileges.

(b) Surplus products of the West are now shipped directly from the localities of production to interior points in the New England States and in the south Atlantic seaboard States. These points were formerly supplied with such products from the Atlantic seaports. Western products are also shipped directly to foreign countries without the payment of any tribute to the commercial interests of the Atlantic seaports. The merchants of the more important of the interior cities are also enabled, under specific provisions of the customs laws of the country, to import goods directly from foreign countries.

(c) Cotton is now shipped, directly from points in Arkansas and Texas and the States east of the Mississippi River to the cotton manufactories of New England, and on the other hand the products of the factories of New England are shipped directly not only to Chicago and Saint Louis, but to points in Iowa, Wisconsin, Minnesota, Nebraska, Kansas, Colorado, and Texas.

Evidently, the facilities which have been provided for direct traffic over connecting lines give to the agricultural, the mining, and the manufacturing industries of the country the option of a great number of home and foreign markets, and thus constantly stimulate competition between trade centers. While these facilities tend to contract the area of the strictly local trade of each commercial city, they also tend greatly to expand the area of its trade, which is competitive with respect to the trade interests of other cities. The result is, that the commercial prosperity of cities is now, much more than formerly, determined by the power of capital and enterprise, and less by geographical position or natural advantages of transportation. This is an exceedingly interesting subject. It cannot, however, be pursued further in this connection.

A knowledge of the general tendency of the system of direct transportation can best be developed by means of a careful and systematic collection of commercial statistics at the various centers of trade, and of the statistics of through and local traffic upon the principal transportation lines of the country. Only by such means can the general tendency of the present modes of commerce be satisfactorily determined.

The practical results of the facilities afforded for direct shipments over connecting roads may be further illustrated by reference to one or two of the more important features and incidents of the railroad system of the present day.

THE TRAFFIC INTERESTS OF RAILROADS NOT ALWAYS IDENTIFIED
WITH THE TRADE INTERESTS OF THEIR TERMINAL CITIES.

The railroad managers of the country generally exercise the full extent of their power toward securing for every class of traffic the longest possible haul over their respective roads, and toward securing the largest possible amount of traffic to the markets of their terminal cities. This power, in so far as relates to "local" traffic, is generally ample, and in some cases almost arbitrary; yet, with respect to what is known as "competitive" traffic, railroad managers are obliged to provide such facilities as may be required for the direct carriage of commodities to the markets of other cities, and even to the markets of cities at rivalry with the city upon the commercial interests of which their traffic interests mainly depend.

The traffic interests of the railroads would in no respect conflict with the trade interests of their terminal cities if direct connections had not been formed with other roads passing through and extending beyond such cities. But the facilities for direct shipments on through bills of lading cause every railroad company to accept and diligently to seek traffic passing directly to points beyond the terminus of its road. This is inevitable, as other elements than those of transportation now exercise a controlling influence in determining the route and the direction of traffic. Commercial cities are thus subjected to certain apparent disadvantages with respect to what are regarded as their own transportation lines, but, on the other hand, the sphere of the competitive trade of such cities is thereby largely extended.

Experience has clearly proved to railroad managers the impracticability, beyond certain limits, of attempts to turn trade out of its natural course in order to promote the interests of the terminal cities of their roads, or in order to secure a longer haul for such traffic than the interests of trade will justify. The merchant must also be free both to receive and to ship goods over roads other than the one which affords him the largest facilities of transportation, or which chiefly subserves the commercial interests of the city in which his place of business is located.

The foregoing statements will be more clearly appreciated in the light of the following practical illustrations:

(a) The interests of the railroads radiating from the city of Chicago into the Northwestern States are closely identified with the trade interests of that city, and, in so far as may be possible, their through and local freight tariffs are framed in such manner as to subserve the trade interests of that city, since the interests of the roads and of the city are closely identified. But the possibility of the diversion of through traffic over other transportation lines passing north or south of Chicago causes the Chicago roads to provide all reasonable facilities for the accommodation of traffic passing through that city although paying no appreciable tribute to its commercial interests.

(b) The merchants doing business at the Missouri River points (Kansas City, Leavenworth, Atchison, and Saint Joseph), and at other important interior trade centers in the State of Kansas, as well as in Colorado, carry on trade not only with Saint Louis and Chicago over roads closely identified with the interests of the latter cities, respectively, but also to a very great extent with points in the Atlantic seaboard States, especially New York, and with manufactories throughout the country. They may also, if they can command the requisite capital, trade directly with cities in Europe. Traffic of this kind passes through Chicago and Saint Louis without paying any direct tribute to the commercial interests of either of those cities, and the railroads connecting the "Missouri River points" with those cities, respectively, are compelled to provide reasonable facilities for the accommodation of this through trade, which is competitive with respect to the commercial interests of both Chicago and Saint Louis, although the traffic interests of the several roads, as before stated, are closely identified with the trade interests of those cities.

These facts may serve to illustrate more clearly the statement made at the beginning, viz: that there are certain incompatibilities which forbid that the interests of the transporter and the merchant should be very closely allied, since it is to the interest of every important railroad company to secure traffic to and from other cities than the ones with which its interests are most closely identified,—traffic which in many cases may be highly competitive with respect to the commercial interests of that city.

Through the facilities afforded for direct transportation over connecting lines, the evident possibilities of the railroad system have been utilized toward securing the freedom of commercial intercourse in obedience to the natural demands of trade.

Under the exceedingly complicated and widely extended system of direct shipments over two or more roads, one object of every railroad manager is *to secure traffic*; another, *to secure for it the longest possible haul*; another, *to convey traffic to the markets of the commercial towns upon the prosperity of which that of the road mainly depends*; and another, *to secure for the carriage of it the best paying rate attainable under all the conditions governing competition between rival markets and between rival transportation lines*.

These considerations impose upon railroad managers a very large and difficult exercise of practical judgment. It is not at all strange, therefore, that in the exercise of their discretionary powers in determining questions which arise in the management of freight traffic, these persons should differ widely, not only with respect to questions of general policy, but also in the conduct of matters of detail; nor is it strange that bitter conflicts should have ensued in the management of competitive traffic.

The freight traffic of railroads may, with respect to the tribute paid by it to the commercial interests of each city, be classified as follows:

First. Commodities which pass directly through a city on through

freight-line cars, and which conduce no more to its trade interests than to those of the railroad stations through which it passes without stopping.

Second. Commodities which are transferred from the cars of one company to those of another, the only contribution to the interests of the city at which the transfer is made being that connected with the expenses incident to such transfer.

Third. Commodities shipped through a city on through bills of lading, but placed in warehouse for future delivery, and involving the expenses of storage and of transfer from the vehicles of one company to those of another.

Fourth. Commodities consigned to the care of an agent charged with the duty of forwarding to a consignee at a more remote point, and involving the expense of transfer, storage, and commissions.

Fifth. Commodities purchased by the merchants of a city and thence distributed in the course of trade, such commodities contributing to the commercial interests of the city the charges for transfer and storage, and the profits arising from trade.

These conditions surrounding the management of railroad traffic, and growing out of the exigencies of trade, not only influence but to a great degree determine the line of policy which shall be pursued by railroad managers in the conduct of their competitive freight traffic.

The foregoing statements appear to demonstrate the fact that there are certain incompatibilities which forbid that the interests of the transporter and of the merchant should be very closely joined together.

The subject of direct trade is further treated of in the chapters of this report relating to the commerce of Chicago, of Saint Louis, of the Missouri River points, and of points in the States of Iowa, Minnesota, and Nebraska.

THROUGH BILLS OF LADING.

The usefulness in commerce of through bills of lading has been greatly enlarged and extended by means of the arrangements entered into between connecting railroads for the conduct of direct trade. The efficiency of through bills of lading as an agency of commercial finance is, in fact, mainly the outgrowth of such combinations.

Negotiable bills of lading, drawn on commodities shipped to distant points, now constitute one of the most effective instrumentalities toward the expansion of the direct trade between remote points in the United States, and between interior points in the United States and points in Europe. The rightful holder of such instruments has, through the customs of trade, acquired the right of possession of the property which they represent, a right which has been generally recognized by the State courts.

Bills of lading furnish a safe and desirable basis of bank credits, and in this way they have become an important instrumentality in the finance of commerce, supplying an extensive medium of exchange in

commercial operations. The shipper is able to negotiate his bills of exchange drawn upon a bill of lading, and immediately re-invest his active capital in other purchases, the commercial credit being carried by the banker, while the merchant confines his attention to the opportunities presented to him in the ever-changing conditions of trade. By this means banking has become a close ally of commerce on extended lines, and the amount of business which can be transacted upon a given capital has been greatly increased. Through the agency of negotiable bills of lading, the amount of currency required to do a given amount of business has been greatly reduced.

In compliance with what is believed to have been a very general demand of the trade interests of the country, a bill was introduced at the third session of the Forty-fifth Congress, entitled "An act to facilitate the negotiation of bills of lading and other commercial instruments, and to punish frauds." A copy of this bill may be found on page 196 of the appendix.

It is believed that the enactment by Congress of a law of this character would, by nationalizing bills of lading, greatly add to their commercial value, especially in commerce with foreign nations.

2.—COMPETITION.

In the first report of this Bureau in regard to internal commerce the subject of competition between rival transportation lines and between rival markets was presented somewhat at length. It is proposed in the present connection to continue the consideration of the subject with special reference to those competitive influences of transport and of trade which have had their origin in, and derive their chief stimulus from the facilities provided by the managers of railroad companies for the direct transportation of goods over connecting lines, without the necessity on the part of the shipper of any supervision over his goods from the point of shipment to the point of delivery. This may, perhaps, be more clearly presented by adverting to certain stages in the progress of railroad transportation in the United States, in so far as the subject relates to the public interests.

So long as railroad managers confined their operations to traffic originating at or destined to the termini of their respective roads, or intermediate points on the line of their roads, there was little competition between different lines. The feature of the railroad system which then appeared to be most inimical to the public interests consisted in the fact that each road was, within the limits of its operations, practically a monopoly, inasmuch as transportation charges were not subject to any direct regulating competitive influences.

The next phase of the railroad system which especially engaged the public attention was the construction of competing roads between common terminal points. It was soon seen, however, that in cases of this kind the managers of the different lines were generally able to enter

into agreements as to the rates which should prevail on the competing roads. But in the course of time the railroad system assumed a much more complex character, the regulation or the suppression of competition through combinations becoming not only difficult but in many cases impossible. This was a direct result of the extension of the railroad system into all parts of the country.

By virtue of agreements entered into between the managers of connecting roads for the conduct of through traffic, rival lines were formed between many of the important trade centers of the country. This involved constantly increasing difficulties. Many cases presented themselves in which a road under a single management constituted a connecting link in several lines between distant points, the through traffic interests of which lines were in certain cases independent of each other, and in other cases antagonistic. Many complications arose touching the relations of railroads to each other.

Finally, the general conduct of the competitive railroad traffic of the country became so environed with difficulties, which railroad managers were unable to adjust, that for several years a chronic war of rates prevailed between the principal trunk lines and also between their western connections.

Through-freight charges were frequently, and during protracted periods, reduced below the actual cost of transportation. This condition of affairs was of course highly injurious, both to transportation and to the commercial interests of the country, inasmuch as "war rates" are always violently fluctuating rates, and therefore highly detrimental to the interests of trade. This condition of affairs, in so far as it relates only to the interests of the railroads, may perhaps be better explained by means of a hypothetical case. Suppose two cities one thousand miles apart, A at the seaboard and B in the interior, and connected by four independent railroad lines, each line consisting of three or four connecting roads, and each road operated by an independent company. It is entirely practicable for the companies operating the roads forming each one of these lines to enter into an agreement as to connecting their tracks and as to the cheap and speedy transfer of freight from the cars of one company to those of another; or, if the through traffic be large, for setting apart a sufficient number of cars to be employed in the carriage of freights between the two terminal points. It is also quite practicable for the companies to enter into such arrangements as may be necessary, in order that either of the terminal roads may issue through bills of lading and collect the through-freight charges. But the establishment of through rates and the maintenance of such rates, as between the four independent lines connecting the supposed cities A and B, is found in practice to be a matter of great difficulty. This may be readily explained. An agreement may, on a given day, be entered into between the managers of all the roads composing the four lines as to the common rate which shall prevail

between the terminal points; but it is found that shippers will prefer to send their goods over the line or lines by which goods are carried at the least risk and with the greatest dispatch, or which afford the best facilities at either terminus, for the receipt and delivery of freight. This almost inevitably leads to an unequal division of traffic among the competing lines. The assiduity and skill with which the freight agents of the several roads and lines solicit through traffic has also much to do in determining the relative amount of freight which shall be secured by each of the lines. The inevitable result in these cases is that one or more of the lines eventually secures a larger proportion of the traffic than the others. In such case one or more of the roads in deficiency offer to shippers an abatement from their proportion of the established rate through some one of the many methods which have been devised for "cutting the agreed rates." Such breaches of faith generally result in a "war of rates." In these struggles each one of the competitors inevitably suffers greater loss from the decline of rates than it can possibly gain from any increase of traffic in the competitive warfare. During these railroad wars, the rate-making is remitted to a great number of soliciting agents of the different roads. Evidently a contest of this sort between agents not charged with any responsibility as to results is not legitimate competition but simply demoralization. A new agreement as to the maintenance of rates may be entered into, but only to run through the same course of bad faith to the inevitable railroad war. The only practicable expedient which has as yet suggested itself to the mind of railroad managers for the prevention of these ruinous wars of rates, is that of first entering into an agreement as to the share of the competitive traffic or of the receipts from such traffic, which shall be allotted to each road. This is the method commonly known as "*pooling*." So extensively has it been adopted, that it now constitutes one of the most important features of railroad transportation in this country. In practice it is found that the line of policy which shall be pursued by the managers of a great trunk railroad with respect to any particular kind of traffic, involves the consideration of the various sources of traffic, the relative magnitude of the local and other traffic of the road, the financial status of the company, the competition of water lines, the markets which are promotive of, or antagonistic to the traffic interests of their roads, and the relations which their road sustains to all connecting and competing roads. Considerations of this character touch the higher range of administration in the management of railroad interests.

An exhaustive treatise upon the various competitive influences which affect the railroads of this country would involve the consideration of an almost innumerable number of circumstances surrounding and affecting particular lines. It would also involve the necessity of entering very far into matters of detail, as in questions of this character circumstances govern cases.

The wonderful extension of the railroad system of the United States

and the establishment of facilities for direct traffic over connecting roads, have created many elements of competition which railroad managers are as yet unable to control, even through the expedient of pooling.

CERTAIN CIRCUMSTANCES WHICH TEND TO REGULATE FREIGHT CHARGES AND TO INFLUENCE THE COURSE OF TRADE.

The cases already adduced, in which attention was called only to the direct competition existing between rival railroads, afford but a very restricted view of the competitive influences affecting rates.

Besides the direct competition between rival roads, as to the traffic between what are generally known as "common" or "competitive points," there is a widely extended competition between all transportation lines, which is not susceptible of adjustment or of regulation through any compact which may be entered into between companies or individuals engaged in the work of transportation. This competition is exerted through the channels of trade.

Prior to the construction of railroads in this country, the few interior water lines did not compete with each other to any appreciable extent, and there was but little competition between cities; but when the railroad system of the country had become widely extended, and all the principal markets and centers of trade had been brought into close communication, a choice not only of transportation routes but also of markets was afforded to all the productive industries of the country. Then it was discovered that with respect to the transportation of certain commodities the rates which might prevail upon any particular line must be established not only with reference to the competition of other roads struggling with it for the traffic between "common points," but also with reference to the prevailing rates charged on railroads, perhaps hundreds of miles removed from its line, and tributary to rival markets.

The nature and extent of this competition, exerted through the markets of the country, may be explained by means of one or two practical illustrations:

(a) The rates which prevail for the carriage of the class of railroad freights commonly denominated *special* are determined mainly by the following circumstances: This class of freight consists chiefly of sugar, molasses, coffee, crockery, and other commodities entering into the daily use of every household; commodities offered for sale in every town and city. The rates which can be charged for the transportation of such commodities between any two points are not determined solely at the discretion of the managers of the railroad which connects such points, but by the rates which prevail on many other lines, and by the prices of such commodities at widely separated centres of trade. Twenty years ago sugar and molasses were largely imported at New Orleans, from which port they were shipped by river to Saint Louis, Louisville, Cin-

cinnati, and other river towns, and thence distributed in the course of trade throughout the Western and Northwestern States. But the merchants of Chicago desired to compete for this trade through the Atlantic seaports with the merchants of the Mississippi and Ohio River towns, and accordingly the trunk lines connecting the Atlantic seaports with Chicago made a special rate for the transportation of this class of goods, which was very much below the current rate for goods of equal value in proportion to weight.

Coffee was also placed in the same class, as in the course of time were many other commodities, the charges for transporting which were, from the circumstances mentioned, determined by the competition of remote trade and transportation forces not susceptible of any sort of control. This gave rise to the class of freights known as "special."

Special rates were afterwards extended to the transportation of the same commodities between the Atlantic seaports and Cincinnati, Louisville, Saint Louis, and other interior towns and cities. Thus the possible competition of the Mississippi River route, via New Orleans, as well as of the water line formed by the Hudson River, the Erie Canal, and the Great Lakes, regulates certain rates which may be charged on the railroads connecting the Atlantic seaports with the interior, and the prices which may be charged by all merchants who deal in the class of goods above-mentioned.*

(b) A remarkable change has taken place in the course of trade with respect to the supplying of general merchandise to the States situated south of the Ohio River, and south of the State of Missouri, as the result of the practice established by the East and West trunk lines of grading their rates between the Atlantic seaports and the cities of Saint Louis, Louisville, and Cincinnati, in such a manner as to meet the competition of New Orleans and the Mississippi River route. These cities have thus become important commercial centres for supplying general merchandise throughout the States of Kentucky, Tennessee, Arkansas, the Northern and Western sections of the State of Georgia, and the Gulf States. This traffic is also inducing a rapidly growing reciprocal trade in the shipment of the surplus agricultural products of these States—chiefly cotton—to and by the way of Saint Louis, Louisville, and Cincinnati.

(c) Another illustration may be adduced for the purpose of demonstrating the fact here under consideration, that the rates which can be charged by a transportation line for the carriage of a large proportion of its traffic are limited by the competition of transportation lines tributary to cities at rivalry with the one with which its traffic interests are especially identified. There are from thirty to forty different lines and combinations of lines, over which grain is transported from the West to the Atlantic seaboard, some of which are all-rail lines, and others rail and lake lines. There is also the water line composed of the great lakes and

*The commodities known as "special" have, within the last two years, been included in "fourth-class freights."

the Erie canal. In the transportation of grain from the Western and Northwestern States, via Atlantic seaports to Europe, there exists the competition of the various routes by rail to Saint Louis and other western river towns, and thence by river to the port of New Orleans. Again, at the extreme North there is the competition of the Canadian rail and water lines via Montreal. Besides this, there is at all times an active competition between steamer lines and sailing-vessels for the transportation of grain from New Orleans, from the Atlantic seaports of the United States, and from Montreal to Europe. There also exists in Great Britain, our chief foreign grain market, the competition of the grain which that country imports from Russia, Turkey, Austria, Egypt, Spain, Portugal, Morocco, Chili, and Australia.

The freight rates which prevail for the transportation of grain over all the interior lines in the United States and on the ocean between ports of the United States and Great Britain are, of course, to a considerable extent, controlled by the competition of the rates obtainable for the transportation of grain from all the other countries mentioned to Great Britain.

The prices of grain which prevail from time to time in the grain markets of this and of foreign countries, also exercise indirectly a very strong regulating influence over the rates which can be obtained for the transportation of grain both on interior and on ocean lines.

The foregoing illustrations are believed to be sufficient in order to show that the competition which is exerted through the markets between transportation lines on the land and on the sea is constant, far-reaching, and uncontrollable, regulating not only the rates which may be charged on interior lines for the transportation of products of the West to points on the Atlantic and Gulf coasts, but also regulating the rates which may be charged on the ocean for the transportation of such products from ports of the United States to ports in foreign countries.

The present instrumentalities of commerce, embracing the facilities afforded for direct trade over connecting lines, telegraphic communication, and the quick and general diffusion of the market news through the public press, have all exerted a potent influence in bringing about the close competition of product with product in the markets of the world, the constant tendency being towards a parity of values and towards the equalization of freight charges.

THE INFLUENCE OF THE COMPETITION OF RIVAL COMMERCIAL CITIES TOWARDS REGULATING FREIGHT CHARGES AND DETERMINING THE COURSE OF TRADE.

Besides the competition between widely-separated lines of transportation which is exerted through the various centers of trade, every commercial city exerts a direct influence towards regulating the freight charges on interior lines, and towards determining the course of traffic with respect to those lines. This influence proceeds from various cir-

circumstances and conditions affecting the commercial status of each city, viz, its geographical position, its tributary lines of internal transportation, the magnitude and facilities afforded for the storage and economical transfer of freight, the cheapness and available supply of coal, iron, lumber, provisions, and of other commodities necessary to meet the daily wants of its people, and the requirements of its industries and its commerce, the amount of its capital available for the conduct of trade, the enterprise, tact, and persistency of its merchants, and the combined force and energy which they are able to bring to bear through associated efforts.

In many ways the citizens of commercial cities may also, through the power of public sentiment, influence the conduct of transportation affairs in so far as to prevent discriminations in rates and other abuses in the general conduct of freight traffic. They may also in this manner secure facilities and effect reforms necessary for the protection or advancement of their trade interests.

The facilities afforded for direct trade over connecting lines of transport, both upon the land and upon the sea, have tended greatly to extend the range of the direct operations of the merchants of commercial cities and to make each commercial city the competitor, either directly or indirectly, of almost every other commercial city.

The interests of commercial cities are in many ways correlative, and mutually helpful of each other, while in many ways they are constantly at rivalry. This competition is, however, the inspiration of enterprise and the life of trade.

In the struggle for a high place or for supremacy each commercial city stands alone from the very exigencies of its geographical position, its transportation lines, and its general interests. Every avenue of transportation upon the land and upon the sea is its servant, and the field of its commercial activity is the world.

CONCLUDING REMARKS IN REGARD TO COMPETITION.

The foregoing statements in regard to some of the elements of competition which tend to regulate freight charges, and to control the course both of the internal and foreign commerce of the country, have been presented with the special view of throwing additional light upon the important commercial movements hereinbefore described. It appears from the facts stated, that the discretionary power which the managers of railroads are able to exercise in the adjustment of freight tariffs, and which they are able to bring to bear towards influencing the course of trade, is subject to certain very important qualifying and limiting conditions, proceeding from competition exerted through the markets, and from the direct influence which merchants and other citizens are able to bring to bear towards regulating freight charges and the general course of trade. The general result has been that rates have steadily declined. This is especially the case with respect to the rates

for the transportation of grain, flour, provisions, and all the other necessities of life.

The following table shows the average annual freight charges per ton per mile on several of the most important trunk lines of the country, from the year 1868 to the year 1878 inclusive.

Statement showing the average annual freight-charges per ton per mile on several transportation-lines engaged in commerce between the Western States and the Atlantic seaboard from 1868 to 1878, inclusive.

Line.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.
	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>	<i>Ots.</i>
New York canals (freight and tolls) .....	.872	.924	.835	1.027	1.016	.887	.743	.668	.679	.564	.42
New York Central Railroad	2.743	2.387	1.884	1.649	1.593	1.573	1.462	1.275	1.051	1.014	.914
Erie (New York, Lake Erie and Western) Railroad	1.81	1.539	1.333	1.433	1.526	1.454	1.312	1.209	1.099	.955	.973
Pennsylvania Railroad	1.906	1.718	1.549	1.389	1.416	1.416	1.255	1.058	.892	.980	.918
Boston and Albany Railroad ...	2.811	2.435	2.193	2.09	2.016	1.958	1.818	1.533	1.288	1.208	1.129
Philadelphia and Erie Railroad.	1.609	1.433	1.303	1.205	1.192	1.135	.977	.865	.776	.786	.623
Lake Shore and Michigan Southern Railroad	2.336	1.714	1.504	1.391	1.374	1.335	1.18	1.01	.817	.664	.734
Michigan Central Railroad	2.45	2.09	1.982	1.747	1.867	1.891	1.569	1.396	1.115	.878	.848
Chicago, Burlington and Quincy Railroad	3.248	3.063	2.392	2.2	2.076	1.921	1.901	1.889	1.603	1.428	1.267
Chicago and Northwestern Railroad	3.168	.....	3.093	2.869	2.614	2.351	2.226	1.946	1.789	1.702	1.734

N. B.—The fiscal years of the railroads nearest to the several calendar years are given in the above table.

The foregoing table indicates that there has been a large falling off in the average annual freight receipts on all the transportation lines mentioned. Without taking into account the tonnage transported on the different lines, it appears that the average earnings per ton per mile of the several transportation lines fell from about 2.295 cents during the year 1868 to .954 cents during the year 1878, or less than half the average rate of the former year. The effect of the reduction of freight charges on the railroads of the country is illustrated by the fact stated in Poor's Railroad Manual for 1879, that "Had the rates of 1873 on the New York Central and Hudson River Railroad been maintained, the freight earnings of that road, during the past year, would have equaled \$31,000,000 in place \$19,045,830, the amount actually received."

Until about the year 1870, it was the opinion generally entertained by the managers of the east-and-west trunk lines that they could not profitably engage in the transportation of grain from Chicago to New York at a lower rate than about 40 cents per hundred pounds, or 24 cents per bushel on wheat. But during the year 1878, the average rate for the carriage of wheat from Chicago to New York was, by lake and canal, somewhat under 10 cents per bushel, and by all rail only 16½ cents

per bushel. During the present season of 1879, grain has been shipped from Chicago to Liverpool for 17 cents a bushel, a rate but little greater than that which prevailed for the transportation of grain from Buffalo to New York by canal and Hudson River only ten years ago.

3. POOLING OR APPORTIONMENT SCHEMES AND THEIR INFLUENCE UPON COMPETITION IN TRANSPORTATION AND IN TRADE.

The use of the term "pool" as a designation of the agreements entered into between railroad companies for the apportionment of traffic, or the receipts from traffic, is of recent application. The term has usually been applied to a game of *chance*, in which all the players contribute towards making up the stake or pool, and the winner in the game gets the whole, whereas what is now known as a railroad "pool" is simply an agreement entered into between companies for the apportionment or division of the traffic between roads engaged in competitive traffic. By this arrangement they take no chance, but seek to escape the chances that, under unrestrained competition, they may be able to secure less than what they deem to be their equitable share of traffic, and reduce to a certainty the share of the traffic which they shall secure. The main object, however, is to avoid the great losses inevitably resulting from wars of rates. In its application to the apportionment or division of railroad traffic, the meaning of the word "pool" appears to be, in a double sense, the reverse of its ordinary significance in its application to games of chance.

Pooling or apportionment schemes now constitute the most conspicuous, and perhaps the most important, feature of our railroad system. They embrace the principal part of the competitive railroad traffic between the Missouri River at the West and the Atlantic seaboard at the East, and between the great lakes at the North and the Gulf at the South.

The history of their growth in this country indicates that they have generally been entered into reluctantly, and as a result of a practical demonstration of the fact that in a war of rates each contestant must lose, through the inevitable decline in rates, much more than can be gained by any possible acquisition of traffic in a contest.

In the struggles which have taken place between railroad companies for what is deemed to be their share of "through" or "competitive traffic," it has been found that each competitor possesses a capacity to injure its rivals far beyond its ability to secure profits for itself. In the course of the great competitive struggle for traffic between the West and the seaboard, agreement after agreement was entered into, only to be broken, through one or more of the many devices resorted to for "cutting rates," and a war of rates generally followed. These contracts always entailed severe losses upon the companies engaging in them. At last there arose a general demand among the companies for the establishment of some line of policy, or for the exercise of some governmental power, adequate to the task of preventing such disasters. Certain gentlemen

of high abilities, who had brought to the consideration of the subject the advantage of a large experience in railroad affairs, recommended that the railroad companies should call upon the national government to establish some sort of supervisory authority, for the purpose of deciding upon matters connected with competitive inter-State traffic, and having the power of compelling the various lines to comply with the terms of the agreements which they might enter into with each other as to rates and the division of the traffic. But no concerted effort has ever been made towards the consummation of this scheme.

In entering into an apportionment arrangement, each company surrenders the right to the uncontrolled management of its own affairs with respect to the traffic divided, and this sacrifice is made by the respective companies with the single object of protecting themselves against themselves.

The settlement of difficulties through apportionment is always a delicate matter. This results from various causes. Every great railroad company, with widespread and diverse interests, must adopt a line of policy dictated, not by the interests of any particular part of its traffic, but by the object of promoting the general interests of the whole enterprise. In the pursuit of such a policy, it is sometimes advisable for a company to sacrifice a part of its traffic for the sake of subserving other interests of more importance; for railroad companies, like individuals, find in their competitive struggles that sacrifices must oftentimes be made for the sake of securing advantages, upon the turn of which the success or failure of the whole enterprise may depend. It is not strange, therefore, that in special cases railroad managers should have entertained diverse views as to the advisability of entering into pooling arrangements.

Agreements as to the share of the traffic which shall be apportioned to each road are not based upon the relative cost of constructing the different roads proposing to enter into the arrangement, nor upon the actual cost of transportation on each road, nor upon the relation of the receipts to the expenses of each road, nor upon the financial status of the several companies. The only circumstance which has any appreciable weight in the determination of that question is simply the relative ability of the several roads to secure traffic.

Agreements as to the pooling or apportionment of traffic are therefore based upon the relative amount of traffic which each company may have been able to secure, during a period of warfare, and upon a careful estimate of the present ability of the several companies to secure traffic.

Apportionment schemes are always liable to disruption as the result of changes materially affecting the relation of the several constituent lines to each other. Such changes are constantly taking place in the circumstances surrounding the various companies, as the result of the development of local or through traffic, the construction of new roads, the formation of new combinations and agreements, and many other circumstances affecting their internal conditions or external relations. This is

strikingly illustrated in the case of the apportionment of traffic which has existed between the railroads connecting Saint Louis and Chicago, respectively, with the Missouri River points. The present arrangement between these roads differs widely from the arrangement entered into only two years ago, supposed at the time to have been a permanent settlement of the difficulties then existing.

Generally, the traffic divided bears a different relation to the magnitude of the total traffic of each member of the association. It may constitute the principal part of the traffic of one road and only an insignificant part of the traffic of another road. In any contest the latter road will have the greater power of resistance, from the mere fact that it can better afford to endure its smaller proportional loss of revenue inevitably resulting from a war of rates.

The pooling arrangements which have been entered into between railroad companies in this country differ from each other in several important particulars. In certain cases the division or apportionment of traffic is based upon the tonnage moved, constituting what is known as a physical pool, and in other cases the receipts from traffic are divided, constituting what is known as a money pool.

A second important distinction relates to the means by which the agreement as to a division or apportionment of traffic is carried into effect. Two methods have been adopted for that purpose in this country. First, through an organization of some sort instituted by the railroad companies themselves, the duties of the officers of such organization being to keep a record of the amount of traffic actually carried by each road, and to give such information or direction as will cause the roads in excess to make restitution to roads in deficiency. Under this method of pooling there is no discrimination necessarily involved with respect to shippers.

A second method of pooling is effected through the agency of so-called "eveners." Under this method the railroads first agree as to the share of the competitive traffic which each shall be allowed to have, and an agreement is then made with one or more of the principal shippers that they shall so direct their shipments that each road shall receive the proportion of the competitive traffic agreed upon. For this service the "eveners"—so called from the fact that they keep the division of traffic between the several roads *even with*, or *equal to*, the several shares agreed upon—are allowed certain compensation upon their own and all other shipments. This concession gives them marked advantages over all other shippers, and the method is therefore regarded as being highly inimical to the general interests of trade.

This appears to be an intensified form of the evils of special rates, which grew up during the period of unrestrained warfare between railroads resulting from the remission of the rate-making power to a multitude of irresponsible freight agents. Certain railroad managers of large experience and great ability have declared that this method of

apportionment is against sound principles of railroad management; it having generally been found that the "eveners" in time acquire the power to dictate terms to the railroad companies, and in some cases to acquire an improper influence over railroad managers.

The pooling arrangements thus far referred to, relate only to the control of the traffic of railroads, without any direct attempt to interfere with production. In one important instance, however, that of the Anthracite Coal Combination of Pennsylvania, the attempt has been made to control both production and transportation. The operations of this combination are more fully described hereafter. This organization is, however, not now in existence, it having been disrupted on the 1st of January, 1879.

The results of almost all the pooling arrangements, in so far as relates to the interests of the railroad companies, have been beneficial—the advantages realized from the maintenance of rates, and the avoidance of destructive railroad wars having been far greater than the real or supposed losses which any of the companies suffered in consequence of accepting, under the terms of the agreements, what may have been regarded by them as less than their proper share of the competitive traffic.

The apparently simple expedient of pooling or dividing traffic has, within the last four or five years, developed into elaborate centralized organizations, having the determination of railroad classifications, the raising and lowering of competitive rates, the determination of rates to and from points in the United States and in foreign countries, and of many other important questions involving the relations of the railroads to each other, and to the commercial and industrial interests of cities and States.

These organizations embrace within themselves the fundamental principles of representative government. The legislative functions are exercised through central committees, composed of representatives of the several railroads. The executive functions are performed by an officer, usually styled commissioner, and the judicial functions by a board of arbitrators, selected with special reference to their qualifications as to character, intelligence, and special knowledge of railroad affairs.

These associations are entered into voluntarily, and are held together merely by a common interest in preventing the disastrous results of railroad wars. The pooling or apportionment of freight traffic does not constitute in every instance an essential feature of the administration of these railroad governments. In certain cases it has been found entirely practicable to divide the traffic between competing roads, the competitors accepting the results actually reached without attempting to forecast them from the beginning by apportionment.

In the discussions of the railroad problem, the importance of the power of establishing classifications of freight appears not to have been fully appreciated. It is not proposed to consider the subject here farther

than to present the following illustration, showing the range in the rates which prevail in the traffic between Chicago and New York:

Class.	Eastbound rates.	Westbound rates.
	<i>Cents.</i>	<i>Cents.</i>
First.....	120	75
Second.....	90	60
Third.....	70	50
Fourth.....	45	40

Several of the principal articles carried are subject to a special rate.

Thus far, for the sake of perspicuity, railroad apportionment schemes have been treated of only in their relations to the interests of the railroad companies. Their bearing upon the public interests is, of course, a question of much greater importance. Railroad pools, which are operated by the companies themselves, now find favor in the eyes of the public, mainly from the fact that they have been the means of arresting discriminations which were in a high degree detrimental to the industrial and commercial interests of the country.

Five years ago, the formation of such an enormous pooling scheme as that now existing for the division of the entire west-bound traffic of New York City, and for the maintenance of rates upon west-bound traffic from Boston, Philadelphia, and Baltimore, and the entire New England States, would have been regarded as in the highest degree inimical to the public interests.

In the year 1874, an attempt was made to induce the managers of the east and west trunk lines to enter into an agreement as to the differences in rates which should prevail between the four principal Atlantic seaports and the principal commercial centers of the Western and North-western States. This scheme was known as "The Saratoga Compact." It embraced no provision as to the apportionment of traffic. Nevertheless, it failed of adoption. The president of one of the trunk lines asserted that *such a combination would be regarded by the people as being against their interests, that as a result, a combination of the people would be formed against the railroads of the country, and that through the courts, the legislatures, and the National Congress, hostile action would be induced, which would more than counterbalance the advantages realized from the increased rates which might be commanded through so powerful an organization.*

Subsequent events, however, caused the people to acquiesce in the much more powerful combination of pooling.

A war of rates, of unprecedented severity, began soon after the failure of the Saratoga compact of 1874, and continued, with brief intermissions, for nearly three years. During this period the frequency and violence of the fluctuations of rates operated in a high degree prejudicially to

the interests of trade. The granting of special rates to favored shippers proved, however, to be far more injurious to trade than violently fluctuating rates or the maintenance of what might even have been regarded as high rates. While this practice continued published rates afforded to merchants no information whatever as to the actual price which their competitors in trade were paying for transportation services.

Discriminations in favor of through traffic as against local traffic also constituted a most serious evil resulting from railroad wars, since the great reduction in rates incidental to such contests applied only to through traffic. Owing the same cause the most injurious discriminations were made in favor of certain cities as against their competitors. The glaring injustice of these discriminations produced wide-spread discontent, and the result has been that loud and earnest protestations have reached State legislatures and the national Congress.

During railroad wars, the general freight agents, or other executive officers, upon whom properly devolves the matter of determining rates invariably remit their authority to a multitude of soliciting agents and local freight agents in all parts of the country, the only order promulgated for their guidance being *to grant any rate for traffic which may be necessary in order to secure it*. Although this method of procedure was obviously in the face of good administration, of order and of economy, it was found to be an inseparable concomitant of a war of rates.

During the struggles referred to success waited upon intrigue and false representations. The freight agents deceived the merchants, and the merchants deceived the freight agents. For several years the railroad transportation interests of the country ran at loose ends. The contest being carried on independently of leadership and without method, lost the name of competition and ended in demoralization.

It appears hardly necessary to observe that such a contest, involving results in the highest degree detrimental to the interests of productive industry, of commerce, and of transportation, had in it none of those conservative elements of legitimate competition which attach to ownership and to personal responsibility for results.

Experience both in this country and in several countries of Europe seems to have clearly proved that, for the reasons already mentioned, the great beneficent law of competition fails to secure a proper adjustment of rates between rival railroads, or combinations of railroads, struggling for a share of the traffic between common points. This appears to be a direct result of those peculiarities of the railroad as a highway of commerce which forbid that it should become, in the ordinary sense, a free highway. The necessity of some sort of restraint upon a competition which uniformly degenerates into demoralization has therefore forced itself upon the attention both of railroad managers and of those who view the matter in the light of the public interests.

The evils which produced a general feeling of discontent and of animosity against the railroads were not accidental or abnormal, but inherent

in the system of independent railroad management. A radical remedy was therefore needed.

Notwithstanding the objections to combinations for the pooling or apportionment of traffic which naturally suggested themselves, the public were prepared to welcome the establishment of those organizations merely from the fact that they held out the promise of relief from unjust discriminations and other intolerable abuses; and the fact that certain of them have, to a very great extent, accomplished that object, commends them to the degree of public favor which they now enjoy.

It is objected that the power acquired by the managers of the great railroad confederations in regard to the raising and lowering of rates, and determining the relative rates which shall prevail to and from different centres of trade, give to those persons too large an influence over the relative growth of cities, of States, and of sections, and this objection has the greater force from the fact that the commissioner or other executive officer is in certain cases clothed with almost autocratic powers. This apprehension is, of course, prompted by an instinctive aversion, on the part of the people of this country, to any undue restraint upon commerce or upon industrial enterprise, especially when exerted through corporate power.

The advocates and managers of apportionment schemes, and some of the best-informed and most influential railroad officers of the country, urge, on the other hand, that the foregoing and other objections to the division of traffic are simply the result of crudities incidental to the incipient stage of a great practical method of adjusting the transportation interest of the country; and they declare that they are desirous of substituting a direct responsibility before the law for the somewhat arbitrary powers which they now exercise through voluntary association. It appears to be beyond doubt that these powers are too large and too general in their application to be exercised independently of any governmental restraint.

It has also been urged in favor of railroad confederations securing the apportionment of traffic, that they present the inter-State traffic of the country in such an aggregated form as to render railroad companies directly amenable to the practical requirements of statutory provisions touching violently fluctuating rates, unjust discriminations, and other abuses, and that such direct responsibility cannot attach so long as each road is operated independently of its competitors. If, upon careful investigation, it shall be found that this is likely to be one of their results, the fact will commend them to public approval.

Apportionment schemes must, at the present time, be regarded as an experimental phase of the railroad system in the progress of its development towards a condition of affairs when the interests of the railroads and of the public, with respect to the great question of transportation, shall have been adjusted and secured under the administration of general and equitable provisions of law.

It may be that in the means which have been established by railroad managers for securing the apportionment of traffic and the stability and uniformity of rates with respect to shippers, is to be found the correct principle of adjustment, and that the present objections to apportionment apply only to particular methods or to the manner in which such compacts are in certain cases administered.

Whether this be true or not must, in view of the rapid extension of apportionment arrangements, be determined, before long, by results. It is a question which can never be decided by reasoning *a priori*, but only through patient and careful investigation.

Organizations for the apportionment of traffic have been so conducted in Great Britain as to meet the public approbation, or at least in such manner as to excite no apprehensions as to their operations being prejudicial to the public interests.

Under our mixed jurisdiction of State and national authority over internal commerce, the question as to what can or what ought to be done in the direction of a legal recognition of apportionment schemes may be regarded as one of the most important features of that great politico-economic question,—“the railroad problem.” This question is now commanding a deep and widespread interest. Public discussion will tend to throw much light upon it, and it is believed that a satisfactory solution will be reached at last through judicious and well-considered legislative action.

The most important pooling or apportionment schemes in operation in the United States at the present time are the following:

First. The association controlling competitive railroad traffic between the Western and Northwestern States and the Atlantic seaboard.

Second. The Southern Railway and Steamship Association.

Third. The Southwestern Railway Association, or Chicago-Saint Louis pool.

Fourth. The Chicago-Omaha pool.

Fifth. The pooling or apportionment arrangement between the Chicago, Milwaukee and Saint Paul, the Chicago and Northwestern, and the Chicago, Saint Paul and Minneapolis Railroads.

Sixth. The cattle pool of Chicago, and of other Western centers of the cattle trade.

Seventh. The petroleum or coal-oil pool.

Eighth. The anthracite coal combination or pool.

These several apportionment schemes will be described in the order in which they have been named.

THE ASSOCIATION CONTROLLING COMPETITIVE TRAFFIC BETWEEN
THE WESTERN AND NORTHWESTERN STATES AND THE ATLANTIC
SEABOARD.

Under this association established by certain railroad companies for their own government, the competitive freight traffic of the various lines connecting the Western and Northwestern States with the Atlantic seaboard is placed under the control of a central organization.

The powers of the organization, embracing all matters relating to competitive traffic, have been developed during the last three years.

In view of the magnitude of the interests affected by this organization, a brief allusion may be here had to the circumstances which led to its establishment.

For several years prior to 1877, the city of New York enjoyed the advantages of direct trade with the principal towns and cities throughout the Western and Northwestern States, by means of the New York Central and Hudson River Railroad, the Erie Railway, the Pennsylvania Railroad, and the Baltimore and Ohio Railroad,* and the western connections of those roads.

Between these railroads a bitter contest was for a long time waged for the purpose of securing the largest possible share of the competitive west-bound traffic of that city. The intensity of this struggle was mainly due to the fact that about 60 per cent. of the freight cars which carry full loads on their passage from the West to the seaboard return empty, and that the city of New York supplies the principal part of the west-bound traffic. Pending the contest, each one of the railroads interested, as well as their western connections, practically remitted the rate-making power to the individual judgment and adroitness of a multitude of soliciting agents, the only general order in force for their guidance being to make such rates as would enable them to secure an adequate share of the traffic. Under this state of affairs, demoralization naturally ensued. Rates fluctuated frequently and violently, and the most glaring and outrageous discriminations were made in favor of special shippers. No merchant, producer, or manufacturer knew what his competitors were paying for transportation services. Occasionally the general managers met and entered into agreements as to rates, but it was found utterly impossible to maintain such agreements, merely upon faith in promises to which none of the parties could be held for a day. This was quite as detrimental to the commercial and industrial interests of the country as to the transportation interests involved.

In order to protect themselves against the evils arising from their own

* The Baltimore and Ohio Railroad has for several years secured direct communication between the cities of Baltimore and New York, for through-freight-traffic over the lines of the Philadelphia, Wilmington and Baltimore Railroad, and the Pennsylvania Railroad. Whenever either of these lines has refused to make acceptable arrangements with the Baltimore and Ohio Railroad Company, the latter has secured the New York connection by means of steamer lines plying between New York City and Baltimore.

excesses, the managers of the four trunk lines finally resorted to the expedient of pooling, or dividing the traffic. They established a central organization charged with the whole matter of adjusting the classifications of freights, of raising and lowering rates, and of attending to all matters in detail necessary for carrying into effect the agreement as to dividing the traffic. The arrangement was perfected in the month of July, 1877, under the guidance of Mr. Albert Fink, who was appointed the commissioner or chief executive officer.

An executive or central committee was also appointed, consisting of a representative of each one of the trunk lines, who were to conduct all matters relating to the joint west-bound traffic. Any question relating to the joint business upon which the representatives of the four trunk lines could not agree, was required to be submitted to the decision of the commissioner. This organization was established upon the same principle as that which existed in the Southern States, and was fully described by Mr. Albert Fink in a statement made to this office. See appendix to the first Report on Internal Commerce, pp. 1 to 48, inclusive. The agreement embraced only the west-bound traffic of New York City to all points west of Suspension Bridge, Buffalo, Dunkirk, and Salamanca, N. Y., Erie and Pittsburgh, Pa., and Wheeling and Parkersburg, W. Va.

The traffic from New York under this agreement was apportioned among the several roads in the following proportions: To the New York Central and Hudson River Railroad, 33 per cent.; to the Erie Railway, 33 per cent.; to the Pennsylvania Railroad, 25 per cent.; and to the Baltimore and Ohio Railroad, 9 per cent. This apportionment scheme with certain changes as to the proportion of the traffic apportioned to each road, still exists as a practically independent organization.

But this organization, designed to effect a division of the west-bound traffic of New York City alone, has been merely the first step towards the formation of a great confederated union of railroads under one governmental control, and having a large centralized power over the freight traffic of all the roads engaged in competitive east-bound traffic in the States situated north of the Potomac and the Ohio Rivers and east of the Mississippi River, including also the competitive east-bound traffic of the Louisville, Nashville and Great Southern Railroad, extending to Montgomery, Ala., at the south, and to Memphis, Tenn., at the west. The organization is known as the Joint Executive Committee. It was formed December 15, 1878. This committee, in connection with the eastern trunk line committee, now takes cognizance of all through competitive freight and passenger traffic in both directions. Under these two organizations, working in harmony with each other, all the roads are, in so far as relates to tariffs, operated as one line.

The following is a list of the roads represented in the organization of the joint executive committee: Atlantic and Great Western; Baltimore and Ohio; Boston and Albany; Cairo and Vincennes; Canada Southern; Central Vermont; Chicago and Alton; Chicago, Burlington and Quincy; Cin-

cinnati, Hamilton and Dayton; Cleveland, Columbus, Cincinnati and Indianapolis; Detroit, Lansing and Northern; Evansville and Terre Haute; Evansville, Terre Haute and Chicago; Fitchburg Railroad of Massachusetts; Grand Trunk Railway; Great Western Railway of Canada; Illinois Midland; Indianapolis and Saint Louis; Indianapolis, Bloomington and Western; Indianapolis, Cincinnati and Lafayette; Lake Shore and Michigan Southern; Lafayette, Bloomington and Muncie; Louisville and Great Southern; Louisville, Cincinnati and Lexington; Marietta and Cincinnati; Michigan Central; New York Central and Hudson River; New York, Lake Erie and Western; Ohio and Mississippi; Philadelphia, Wilmington and Baltimore; Pennsylvania Company; Pennsylvania Railroad; Pittsburgh, Cincinnati and Saint Louis; Peoria, Pekin and Jacksonville; Toledo, Peoria and Warsaw; Vandalia Line, and Wabash.

At the present time the authority of the joint executive committee extends to all traffic from points at the West to the western termini of the several trunk lines, namely: Suspension Bridge, Buffalo, Dunkirk, Salamanca, Erie, Pa., Pittsburgh, Wheeling, Parkersburg, W. Va., and to all points in the seaboard States east of those terminal points. The representatives of the several railroads have, on different occasions in convention, determined the scope and nature of the organization.

The objects of the association are to secure uniformity in the methods of conducting the competitive business, to prevent railroad wars, and to effect an equitable division of the traffic between its various members whenever that may be necessary to the maintenance of rates. This division or apportionment is effected by the method commonly known as "pooling." The association is constituted as follows: The Joint Executive Committee embraces in its membership one officer of each of the roads named in the foregoing list. This committee or legislative body exercises a general directory power over all matters relating to east-bound traffic. The chairman of the organization is also its chief executive officer.

The functions of the Joint Executive Committee are, first, the determination of all matters relating to the classification of freights; second, the adjustment of freight tariffs; and, third, the determination of a great variety of subjects, embracing questions touching the relations of the railroads to each other, the relative rates which shall be charged to and from the different centers of trade, the relative rates which shall prevail between interior points at the West and foreign ports via each one of the four principal Atlantic sea-ports, and the relation of through rates on direct shipments between interior points and foreign ports to the combined ocean and rail rates, with the special object of preventing unjust discrimination against the commercial interests of the Atlantic seaports. It is claimed by the advocates of this organization that it is an instrumentality of great public good. In a recent address to the Joint Executive Committee Mr. Fink, the chairman, said:

"The companies composing this association have already, by their

voluntary action, abolished the pernicious system of special contracts, and all shippers are now put upon an equal footing. Rates for the last few months have been everywhere (in the territory in which these roads are located) maintained, and the great disparity between the local rates and the competitive through rates, which has heretofore been so great a source of trouble and complaint, has ceased to exist."

In his double capacity as chairman and as chief executive officer of the joint executive committee, Mr. Fink is not limited to a casting vote upon matters passed upon by that committee, but in case of disagreement he may decide all matters of administration upon their merits. The majority does not finally determine matters as against the minority, appeal lying to a board of arbitration for final adjudication. The power of the presiding officer to decide questions as against a majority presents a somewhat novel governmental feature.

At each one of the competitive points at the West embraced in the operations of the association, where agreements exist as to the division of east-bound traffic, *i. e.*, Chicago, Saint Louis, Indianapolis, Peoria, Louisville, and Cincinnati, an agent of the association is stationed, who attends to carrying out the agreements between the competing roads, under the direction of the executive officer at New York.

The traffic from points other than those above named is not divided, but the rates to and from such points, are maintained under the authority of the organization. All questions of importance which arise either between the railroad companies themselves, or as the subject of complaint from the public, are passed upon by the joint executive committee. Subordinate executive committees take charge of the traffic matters at each point at which an agency has been established.

A board of arbitration has also been established, the functions of which are to pass upon all appeals from decisions of the Joint Executive Committee, in case the determinations of the chairman are not acquiesced in by all the members. The board of arbitration is also charged with the duty of determining the division of traffic at all points where such division is made.

The east-bound cattle traffic from the West to the Atlantic seaboard is also apportioned from Chicago, Indianapolis, Saint Louis, and Cincinnati. A special agent or the agent already mentioned sees that the division is made in accordance with the agreement—the accounts being kept in the general office of the chairman of the committee at New York.

The west-bound traffic of the eastern trunk lines, *viz*, the New York Central and Hudson River Railroad, the New York, Lake Erie and Western Railway, the Pennsylvania Railroad, and the Baltimore and Ohio Railroad, continues to be governed by an executive committee of managers of those lines. Mr. Fink acts as commissioner under the authority conferred upon him by this committee.

The three gentlemen who act as a board of arbitration in regard to

east-bound traffic under the Joint Executive Committee, exercise a similar function with respect to west-bound traffic in connection with the eastern trunk line committee.

Complaints or requests from individual shippers, boards of trade, or other persons or organizations representing individual or public interests, are from time to time submitted to the committee, and the arguments of such parties are heard and considered by that body.

The west-bound traffic from Boston is divided and managed by this committee, the Grand Trunk Railway of Canada, and its eastern connection, the Central Vermont Railroad, the Boston and Albany Railroad, and the Fitchburgh Railroads being represented in the apportionment.

The New York, Lake Erie and Western and the Baltimore and Ohio Railroads compete for the west-bound traffic of Boston, through coast-wise steamer-lines connecting the eastern termini of those roads with the city of Boston. The west-bound traffic of the New England States at competitive points outside of Boston is also divided and is included in the Boston division.

The apportionment is as follows:

To the New York Central and Hudson River Railroad.....	63 per cent.
To the Grand Trunk Railway.....	17 per cent.
To the New York, Lake Erie and Western Railroad.	8 per cent.
To the Pennsylvania Railroad	7 per cent.
To the Baltimore and Ohio Railroad.....	5 per cent.

From many other New England points a simple arrangement is made as to the maintenance of rates.

The west-bound traffic of New York City is divided between the four trunk lines in the following proportions:

To the New York Central and Hudson River Railroad....	35 per cent.
To the New York, Lake Erie and Western Railroad.....	31½ per cent.
To the Pennsylvania Railroad.....	25 per cent.
To the Baltimore and Ohio Railroad.....	8½ per cent.

The west-bound traffic of Philadelphia is divided between the following roads: To the New York Central and Hudson River Railroad, working over the Reading Railroad, 7 per cent.; to the New York, Lake Erie and Western Railroad, working over the Reading Railroad, 12 per cent.; to the Pennsylvania Railroad, 71 per cent.; and to the Baltimore and Ohio Railroad, over the Philadelphia, Wilmington and Baltimore Railroad, 10 per cent.

The west-bound traffic of Baltimore is effected through an agreement between the officers of the Pennsylvania Railroad Company and the Baltimore and Ohio Railroad Company, the division being as follows: To the Baltimore and Ohio Railroad Company, 70 per cent., and to the Pennsylvania Railroad Company, 30 per cent. These roads are regarded as the only competitors for the west-bound traffic at Baltimore.

No apportionment is made of the west-bound traffic originating at points between the Atlantic seaboard and the western termini of the eastern trunk lines, but the rates on all such traffic are maintained under the authority of the eastern Trunk Line Committee.

The business transactions by the Joint Executive Committee and of the eastern Trunk Line Committee, are published in the proceedings of the conventions of the representatives of the various roads. Publicity is also given to the means and methods by and through which those objects are sought to be accomplished. The acts of the general commissioner and the determinations of the board of arbitration are also made public. This great organization challenges public scrutiny, and those who represent it, seek for it public approval and legal recognition upon the assumed ground that it presents, both in the interest of the public and of the railroad companies, the best and most practicable solution which has yet been devised for settling the difficulties presented by the by the railroad problem.

At the meeting of the Joint Executive Committee held at Chicago on the 18th of December, 1879, Mr. Fink, the chairman and executive officer, made the following statement:

"The only bond which holds this government (the Joint Executive Committee) together is the intelligence and good faith of the parties composing it. To give greater stability and permanency to the operations of this committee, it would be desirable to make them legally binding upon all parties by legislative action, provided it can be shown, as I believe it can, that its operations are beneficial to the public interests. I consider that no other legislative action would be necessary in order to remedy the evils which it has been attempted, unsuccessfully, to correct by State legislation, and which may be attempted by Congressional legislation, I fear, with like results."

THE SOUTHERN RAILWAY AND STEAMSHIP ASSOCIATION.

The Southern Railway and Steamship Association was the first apportionment scheme of any considerable magnitude and importance established in this country.

The membership of this pooling arrangement consists of railroads in the States of South Carolina, Georgia, Alabama, Virginia, North Carolina, and Tennessee, and certain coastwise steamer lines connecting the ports of Boston, New York, Philadelphia, and Baltimore with the following Southern ports: West Point, Richmond, Norfolk, and Portsmouth, Va.; Wilmington, N. C.; Charleston and Port Royal, S. C.; and Savannah, and Brunswick, Ga. At the several Southern seaboard ports mentioned, the coastwise steamer lines connect with the railroads of the States above mentioned.

The business of the association embraces only traffic between the competing points within its territorial limits at the South and the cities of Boston, New York, Philadelphia, and Baltimore.

The States of South Carolina and Georgia and about half of the State of Alabama are embraced within its operations.

The traffic between the interior and the South Atlantic ports is also apportioned. This applies almost exclusively to cotton designed for direct exportation to foreign ports.

The principal part of the surplus products of this section of the Southern States seeks, as primary markets, the four Northern ports above mentioned, or is shipped direct to the markets of Europe.

At Boston, New York, Philadelphia, and Baltimore is purchased a very large proportion of the general supply of merchandise required throughout this section. Shipments towards the north and towards the south are made on through bills of lading covering both the steamer and rail lines.

The business of the Southern Railway and Steamship Association does not embrace any part of the local traffic of the railroads which have been mentioned, whether such local traffic be competitive with respect to the traffic of the association or not; nor does it directly embrace steamer traffic between Northern and Southern seaports; but the influence of the association is sufficient to regulate and maintain all these local rates, and to prevent any combination in conflict with the rates determined through the operations of the organization.

The term *local* as here used embraces all traffic between the different points in the Southern States, including shipments to the seaports. Shipments of cotton destined to foreign countries are regarded as being competitive and are apportioned.

The Southern Railway and Steamship Association had its origin in difficulties similar to those which forced the railroads of other parts of the country to enter into apportionment arrangements. The evils alluded to were violently fluctuating rates and unjust discriminations in favor of special shippers, such discriminations being the result of remitting to soliciting agents the power of granting special rates for the purpose of securing traffic. Under this condition of affairs, a few of the large shippers secured such advantages over the smaller shippers as practically to drive the latter out of business. This applied both to the shipment of Southern produce to the Northern seaports and to foreign countries and to the shipment of merchandise from Northern ports to competing points at the South. This condition of affairs not only operated prejudicially to the interests of trade, by breaking down competition, but it also operated detrimentally to the interests of the Southern railroads and of the coastwise steamer lines, by virtually placing them under the control of a few large shippers, whose interest it was, by secret operations, to keep the managers of the various lines in a continual struggle with each other.

The first pooling arrangement was entered into in December, 1873, between four roads connecting Atlanta, Ga., with the seaboard. This organization was enlarged and improved in its methods of doing

business at a convention held in December, 1874, and at an adjourned meeting held in January, 1875. A clearing house was established for the purpose of keeping an account of the traffic apportioned. In September, 1875, a convention of the managers of Southern railroads and steamship lines was held, at which a paper was presented by Mr. Albert Fink, embodying the principal features of an organization. Another paper was presented by General Haupt. From these papers and the results of the labors of a committee a plan of organization was determined upon.

Mr. Fink accepted the position of general commissioner for the period of six months, for the purpose of inaugurating its practical workings. Subsequently the affairs of the association have been managed by Mr. Virgil Powers, as commissioner. At the present time it embraces 40 railroad companies and 29 coastwise steamer lines.

The association is carried on by means of a division of gross receipts from traffic, constituting what is known as a "money pool." As now organized, the association constitutes a government over its constituent members, for the purpose of determining, *first*, all matters relating to the classification of freight; *second*, all matters pertaining to the raising and lowering of freight tariffs; and, *third*, all matters in regard to the relative rates charged at different points, and also many other questions affecting the relations of the railroads to each other and to the commercial interests of the various competitive points.

The legislative operations of the association are exercised through a convention of the managers of the several railroad and steamship companies constituting its membership, each member having a single vote. The general commissioner acts as executive officer, enforces the rules of the association, and supervises the clearing-house accounts. He also acts as arbitrator where there is a disagreement, either as to a division of traffic or as to rates, his decision being subject to an appeal to the board of arbitration.

The rate committee consists of ten members, five representing the more westerly railroads and five representing the railroads extending to the several Southern seaports and the several coastwise steamer lines. This committee is charged, under specific instructions of the association in convention, with the duty of determining the rates which shall from time to time prevail between competing points within the operations of the association at the South and the four Northern Atlantic seaports, and also with the duty of determining the rates on lines *working with the association, i. e.*, lines connecting points in the pool territory with the cities of Nashville, Louisville, Saint Louis, Chicago, Cincinnati, and other Western and Northwestern centers of trade.

The rates on the lines working with the association are determined in the following manner: To all the Southern seaports and to certain of the interior competing points nearer the coast, the coastwise steamer lines are allowed to make rates in connection with the great trunk-lines ex-

tending from the centers of trade of the Western and Northwestern States to Boston, New York, Philadelphia, and Baltimore, which rates shall be less by fixed differences than the direct rail rates which may prevail between such Southern seaports and the centers of trade of the Western and Northwestern States. On the other hand, the rail rates between the interior points embraced in the operations of the association and the centers of trade of the Western and Northwestern States, and of the States of Tennessee and Kentucky, are so graded as to favor direct shipments on the interior rail lines rather than by the way of the trunk-lines from the West to the Northern seaports, thence by steamer to Southern ports, and thence by rail to the interior points above referred to.

The rate committee also adjusts rates with respect to the trade from the various points within the territorial limits of the association to and from Nashville, Louisville, Cincinnati, Saint Louis, Chicago, and other cities, and to and from the four Northern seaports. These are matters requiring, in the detail of their management, a large amount of careful and laborious work in the nature of adjustment.

Five general agents of the association are stationed at various points at the North and at the South. It is proposed to increase this number so as to have an agent at every important competing point, who shall keep a record of the apportioned traffic independently of the returns made by the railroad companies themselves. This has been deemed necessary in order that all parties to the arrangement may be satisfied that its affairs are honestly conducted.

A board of arbitration has recently been formed constituting the judicial branch of the association. To this board are referred all appeals from the acts of the commissioner and from the determinations of the rate committee.

All bills of lading are issued in the name of the initial road or the road receiving freight, and not by agents of the association as such.

In so far as relates to the railroads and steamer lines connected with this association, the results of its operations appear to have been decidedly beneficial, the actual freight receipts, in proportion to the tonnage carried, having increased. The institution seems to stand upon a firmer foundation to-day than it did three years ago.

The rates which prevail with respect to the competitive traffic embraced in the operations of the Southern Railway and Steamship Association, are regulated by certain external competitive influences. If, for example, the rates between Atlanta and New York are increased beyond a certain limit, the trade of the former city would be driven to other competing trade centers.

Again, sailing vessels compete with the steamer lines of this association between the Northern and the Southern ports.

It is found that if the through rates of the association exceed by certain limits, the rates of the sailing vessels between Northern and Southern

ports, combined with the rail rates between such Southern ports and the interior, the latter rates would neutralize, or destroy, the effect of the through rate of the association. And, in like manner, sailing-vessel rates might be made between the Northern ports and Gulf ports, which, in connection with rail rates between such Gulf ports and points in the territory of the association, would be less than the through rates between the latter points and the Northern seaports.

Besides this may be mentioned the existence of the indirect regulating influence of rates on the Mississippi River, in connection with the rates over railroads extending from that river into the territory of the association. Although it does not appear that any serious or general complaint has been made against the Southern Railway and Steamship Association of maintaining exorbitant rates, yet it is apparent that it exercises, independently of any direct external competitive influences, a very large discretionary power over the rates which prevail to and from all points within its territorial limits in the Southern States.

To the credit of the management of the association it may be said that its acts have, from the beginning, had all desirable publicity. The proceedings of its conventions, the acts of the commission, of the rate committee, and of the board of arbitration, appear from time to time, in printed circulars, which are distributed freely to all persons who may be interested in the operations of the association.

THE SOUTHWESTERN RAILWAY ASSOCIATION.

The Southwestern Railway Association is presided over by Mr. J. W. Midgley, of Chicago, Ill. The object of the organization is to effect an agreed division of the receipts from the traffic of the Missouri River points, viz, Kansas City, Atchison, Leavenworth, and Saint Joseph, between the railroads extending from those cities to Saint Louis, Chicago, and Toledo, respectively. This is one of the most skillfully-constructed apportionment schemes of the country, it being based upon careful and intelligent consideration of the various trade and transportation interests involved.

The Southwestern Railway Association is a somewhat complex organization. It consists, first, of a tripartite pooling arrangement, in which the Chicago roads, the Saint Louis roads, and the line of roads extending to Toledo, via Hannibal, constitute the membership, the division of the total traffic being as follows:

To the Chicago roads, $44\frac{1}{2}$ per cent.

To the Saint Louis roads, $44\frac{1}{2}$ per cent.

To the Wabash (Toledo) line, 11 per cent.

The division of the traffic receipts allotted under the foregoing apportionment to the Chicago roads and to the Saint Louis roads is made between those roads, respectively, by means of subordinate apportionment arrangements.

Besides attending to the mere matter of dividing the traffic according

to the terms of the agreement entered into between the various roads, the executive committee performs certain legislative functions, embracing the determination of the classification of freights, the raising and lowering of rates, and the determination of questions as to the relative rates which shall be charged to and from the different points. In certain cases these rates are influenced by rates charged by railroads outside of the association, and, in other cases, they are made regardless of such considerations. The commissioner is also to a considerable extent charged with the performance of these important duties.

In a recent communication, Mr. J. W. Midgley, the commissioner of this association, says: "The general intention of the organization is to maintain such equitable rates to and from the Missouri River points as shall admit of lesser or equal rates for shorter distances. To illustrate: The intention is to maintain, say a 25-cent rate per hundred pounds on wheat from Kansas City to Chicago, which would allow the roads in the association to charge either that rate or a less rate from local points nearer to Chicago." This is a measure commonly referred to among railroad managers as "protecting local traffic." The propriety and importance of it are generally conceded.

The operations of the Southwestern Railway Association have been quite fully described in the chapter of this report entitled "The competition between Chicago and Saint Louis and between the transportation lines tributary to those cities for the trade of the States and Territories situated west of the State of Missouri."

THE CHICAGO-OMAHA APPORTIONMENT.

The Chicago-Omaha apportionment embraces both the east-bound and the west-bound freight and passenger traffic between Chicago and Omaha. The constituent members of this organization are the Chicago and Northwestern Railway, the Chicago, Rock Island and Pacific Railroad, and the Chicago, Burlington and Quincy Railroad.

This is what is known as a "money pool," an equal division being made of the receipts from the total through traffic of the several roads. The companies manage the apportionment through their own officers, employing no commissioner or arbitrator.

The management of this association involves the determination of the classification of freight, the raising and lowering of rates, and the determination of questions as to the relative rates which shall be charged to and from the different points. In certain cases these rates have reference to rates charged by railroads outside of the association, and in other cases they are made regardless of such considerations.

For several years none of the roads engaged in this apportionment had any important interest conflicting with their common interest in the through traffic between Omaha and Chicago. This condition of affairs

has, however, been disturbed by the following events of recent occurrence:

First. The extension of the line of the Wabash, Saint Louis and Pacific Railroad, from Pattonsburg, Mo., to Omaha, has formed a connecting link of a through line from Omaha to Saint Louis, and it is expected that the connecting link of a through line by this route to Chicago will be completed by May 1, 1880. The managers of this line assert their right to a share of the through traffic.

Second. The completion of the line of the Saint Joseph and Western Railroad from Hastings, Nebr., to a connection with the Union Pacific Railroad at Grand Island. The managers of this line declare their intention to secure a share of the through traffic to and from the Union Pacific Railroad.

Third. The principal stockholders of the Kansas Pacific Railroad, also largely interested in the Union Pacific Railroad, declare their intention to secure a share of the California traffic by deflecting it from the line of the Union Pacific Railroad at Cheyenne, Wyoming Territory.

The foregoing statements serve to illustrate the uncertainty which surrounds all pooling arrangements owing to the fact, elsewhere stated, that such combinations are constructed upon the basis of past results and existing conditions. Changes affecting the internal affairs of the several roads or in the external conditions surrounding them generally lead to the disruption of apportionment schemes, or to their reconstruction upon the basis of a new division of traffic or of the receipts from traffic.

THE APPORTIONMENT ARRANGEMENT BETWEEN THE CHICAGO, MILWAUKEE AND SAINT PAUL, THE CHICAGO AND NORTHWESTERN, AND THE CHICAGO, SAINT PAUL AND MINNEAPOLIS RAILWAYS.

By agreement between the Chicago, Milwaukee and Saint Paul, the Chicago and Northwestern, and the Chicago, Saint Paul and Minneapolis Railways made September 1, 1874, the receipts from through passenger and freight traffic between Chicago and Milwaukee and Saint Paul and Minneapolis, are divided, after reserving 50 per cent. for the expense of carrying the same, on agreed proportions. The arrangement embraced receipts from through traffic only between the points named.

Subsequently, under date of October 1, 1877, a precisely similar arrangement was made between the Chicago and Northwestern, and the Chicago, Milwaukee and Saint Paul Railroad companies, to cover the passenger and freight traffic passing between Chicago and Milwaukee and La Crosse, Wis., and Winona, Minn. The rates of freight applied to the traffic so embraced are established at conventions of the general freight agents of the roads which are parties to the agreement. A secretary or auditor is placed in charge of the accounts. He compiles the statements of business, makes monthly settlements, keeps record of the rates established and of the proceedings of the conventions. The busi-

ness is so naturally within the control of the respective roads that all other matters pertaining to its conduct are disposed of at conferences between the managers.

The management of this pooling arrangement involves the determination of the classification of freight, the raising and lowering of rates, and the determination of questions as to the relative rates which shall be charged to and from the different points. In certain cases these rates have reference to rates charged by railroads outside of the association, and in other cases they are made regardless of those considerations.

THE CATTLE POOL.

The so-called "Cattle Eveners' Pool" was organized in the year 1875, with the object of putting an end to a contest which had for a long time been going on between the trunk lines of railroad, extending from Chicago to Boston, New York, Philadelphia, and Baltimore. This contest had been waged so fiercely, that rates became not only unremunerative, but in many instances entailed an actual loss upon the railroad companies engaged in the traffic. It is stated that at one time cattle were hauled from Chicago to Pittsburgh without charge, and that in certain instances they were hauled from Chicago to the seaboard for five dollars per car load. That this rate was below the actual cost of transportation may be readily inferred from the fact that the rate now (December 1, 1879,) prevailing is about \$110 per car load, and is regarded as reasonable. One of the strategic expedients adopted on the part of an aggressive company was to force its antagonist to a rate below the actual cost of transportation, and then to divert as large a portion as possible of the unremunerative traffic to that road, thus compelling it to bear the principal part of the loss incurred.

The companies finally resorted to pooling merely as an expedient for the prevention of such losses. The several parties to the compact agreed among themselves as to a division of the traffic. They then entered into an arrangement with an association of certain of the principal shippers, who agreed to direct their shipments in such manner as to insure to each company its allotted share of the traffic, or, in other words, to keep the number of cattle shipped over each particular road embraced in the pool even with, or equal to, the percentage agreed upon as the share of that road. These shippers were therefore known as "eveners." The agreement embraced several matters of detail, and it is believed to have included the regulation of stock-yards and resting-places, in some of which the eveners had large proprietary interests.

In consideration of the services performed by the eveners, they were allowed a rebate not only upon shipments made by themselves, but also *upon all cattle shipped by other parties to places situated east of Chicago.* This arrangement gave them a great advantage over all other shippers, and thus tended to paralyze trade by creating a monopoly of the business. The scheme met with a strenuous and determined public opposi-

tion, and it was abandoned by the railroad companies in the spring of the year 1879.

The operations of the Cattle Eveners' Pool were conducted secretly, and great difficulty has been met in the various efforts which have been made to ascertain fully and completely the facts in regard to it. This fact furnishes an instructive comment upon the propriety of its existence on the ground of public policy.

The cattle traffic is now under the general control of the Joint Executive Committee of railroad managers, having, in connection with the Executive Committee of the Eastern trunk lines, general control over all competitive traffic between the Western States and the Atlantic seaboard. Agents for the conduct of this business are stationed at Chicago, Saint Louis, Indianapolis, and Cincinnati, whose duty it is to attend to the dividing of traffic between the several competing railroads, either according to the terms of apportionment arrangements or under the operation of agreements as to rates.

The cattle traffic under this management is believed to be so controlled as to work no unjust discrimination in favor of any particular shipper or shippers.

An expert in regard to the cattle trade, in a report to this office, says "the new pooling arrangement has beyond a doubt been beneficial to the interest of farmers in the Western States, since it has brought to the Chicago market buyers who would not have appeared there if the eveners' pool had remained in operation."

THE POOLING OF THE PETROLEUM OR COAL-OIL TRAFFIC.

The production of petroleum or coal oil in the United States is confined almost exclusively to two districts, known as the lower oil district of Pennsylvania and the Bradford or upper oil district, situated partly in Pennsylvania and partly in New York. The total production of coal oil during the year 1879 amounted to about 20,200,000 barrels of 42 gallons each, of which about 14,100,000 barrels were produced in the Bradford district, and about 6,100,000 barrels in the lower district.

The transportation of coal oil from these two districts, both towards the East and towards the West, has for several years been almost entirely controlled by an association known as the Standard Oil Company. This association or company consists of individuals, business firms, and corporations. Its operations embrace the purchase and sale of petroleum, and the storage, transportation, and refining of that product. Whether all its business is, or is not carried on under the provisions of any particular corporate charter, is a question which cannot be stated at the present time. The cohesive power of a common interest in profits appears, however, to have been found sufficiently strong thus far to hold the association together in its business operations.

The almost marvelous success of this association has resulted mainly from the fact that its managers have succeeded in securing from many

of the trunk railroads of the country special rates of transportation. The power which it has for several years exerted as an "evener" in the coal-oil pool between the trunk lines extending from the oil regions to the seaboard, has enabled it to secure a monopoly of that traffic. The Standard Oil Company has thus become almost the only purchaser and shipper of crude petroleum in the producing regions. It has also become almost the sole proprietor of a system of pipe lines ramifying into all parts of the oil districts, by which pipe lines the oil is conveyed to tanks belonging to or controlled by that company and to tanks belonging to producers and dealers in crude petroleum.

As the result of these extraordinary advantages, the Standard Oil Company has become almost the only refiner of petroleum, it being estimated that 95 per cent. of all the coal oil refined in the United States in 1879 was refined by that company.

The railroad "pool" controlling the transportation of coal oil to the Atlantic seaboard now embraces three of the principal trunk lines, viz: the New York Central and Hudson River, the New York, Lake Erie and Western, and the Pennsylvania Railroads. In carrying on this apportionment scheme the Standard Oil Company acts as an "evener," or, in other words, it agrees to secure to each road the proportion of the traffic agreed upon between themselves, in consideration of certain special advantages accorded over all other shippers in the matter of rates. The result has been that the Standard Oil Company has for several years been almost the only shipper of oil from the producing regions to the seaboard. It has thus been able, also, to exercise a control over the entire exports of petroleum, amounting to 66 per cent. of the quantity moved from the oil regions.

Recently a pipe line has been constructed from the Bradford district to Williamsport, Pa. From the latter point the oil is transported by rail to New York and Philadelphia. Although the quantity of oil conveyed by the pipe line amounted during the year 1879 to only about 3 per cent. of the total quantity moved to the seaboard, the business of the line having commenced in the month of June, yet it has exerted a decided influence over the rates charged by the railroads.

At the present time it appears probable that the railroad companies will eventually place all shippers upon an equality, a measure which will have the effect of throwing the purchase and sale and the refining of petroleum open to the competition of all who may be disposed to engage in those pursuits.

THE ANTHRACITE COAL COMBINATION.

The pooling arrangement which for several years existed between the so called "Anthracite Coal Railroads" was more comprehensive in its character than any other pooling arrangement which has been entered into in this country, inasmuch as it embraced the control both of the production and of the transportation of anthracite coal, and, as a necessary conse-

quence, the control of the market price of that commodity. The steps toward the consummation of this powerful combination were taken with the avowed object of substituting for competition in the production and in the transportation of anthracite coal the centralized power of a monopoly, and the advocates and framers of the scheme invoked public approval of it upon the ground that the interests of the laboring classes employed in the mining of coal, the proprietary interests in the mines, the interests of transportation, and the social and industrial interests of the country would thereby be better subserved than under the condition of affairs previously existing.

This scheme is not open to the censure which has attached to certain other pooling arrangements in this country, in that they have been secretly managed.

The bearings of this anthracite coal combination upon the various interests of the country, in so far as relates to the practical question, *the price of coal*, and to the various legal and politico-economic questions involved, are matters of great public interest. These questions have been hotly contested, both as to matters of detail and of public policy.

The history of this gigantic combination appears to have demonstrated the fact that, in the absence of any direct opposing act on the part of the public, the parties who engaged in the scheme have thus far been unable to resist the disintegrating influence of internal dissensions and of external opposing circumstances.

In view of the magnitude and importance of the interests involved, a brief account of the formation and operations of the anthracite coal pool may be here presented.

All the anthracite coal mines of the United States are situated in the State of Pennsylvania, and are embraced in what are known as the Southern coal field, the Middle coal field, and the Northern coal field.

The product of the Northern or Wyoming coal field reaches the market principally through the outlets furnished by the Delaware and Hudson Canal, the Delaware, Lackawanna and Western Railroad, and the Pennsylvania Coal Company, and, also, to some extent, by the lines of the Lehigh Valley Railroad, the Central Railroad of New Jersey, and the Pennsylvania Railroad.

The product of the Lehigh region, which comprises the detached coal basin in the neighborhood of Hazleton and Beaver Meadow, and, also, the extreme eastern end of the Schuylkill coal field, is carried to market exclusively over the lines of the Lehigh Valley Railroad and the Central Railroad of New Jersey.

The product of the Mahanoy and the Schuylkill coal fields is carried to market principally over the lines of the Philadelphia and Reading Railroad Company, but a small portion of that of the Middle coal field is carried by the Lehigh Valley Railroad, and about the same percentage

from both the Mahanoy and Schuylkill coal fields by the lines of the Pennsylvania Railroad.

The principal circumstances which led to the formation of the anthracite coal combination were, first, the fact that the production of coal had been enormously increased by the demand during the late civil war; and, second, that a competitive warfare had for several years been waged between rival roads largely engaged in the transportation of anthracite coal.

The principal contest for the transportation of coal from the Wyoming coal field to the seaboard was between the Delaware, Lackawanna and Western and the Central of New Jersey. These roads cross the State of New Jersey from west to east, and supply the market of New York.

In the course of the competitive struggle between the various lines for traffic, several consolidations of roads occurred, and there was also a considerable amount of new railroad mileage constructed. Tributary lines were also built, and the facilities for the transportation of coal afforded by the various companies became enlarged to such an extent that the capacity to transport coal, and the amount actually transported, largely exceeded the demands of the markets. This resulted in a fall in the price of coal below the cost of its production, and also, as is asserted, in a fall in the rates for its transportation below the actual cost of the service.

In order to protect themselves against a ruinous competition, as between themselves, the several companies entered into an agreement as to the relative share of the total traffic which each should carry. This compact continued from the 1st of December, 1872, to the latter part of August, 1876, and embraced only coal carried to what were known as "competitive points," each company retaining exclusive control and management of its local trade. The representatives of the railroad interests asserted that during the continuance of this "pool," 1872 to 1876 the prices of coal were not excessive, being no greater than during previous years, and only sufficient to maintain the accustomed dividends on their properties. The opponents of the pool, on the other hand, alleged that the companies had, in their strife against each other, expanded their "plant" far beyond the requirements of the business, and declared that all such capital should share the common fate of depreciation in value which had fallen upon other kinds of property and other business enterprises throughout the country.

Prior to and during the continuance of this first coal combination, the several railroad companies secured the ownership of about 75 per cent. of the entire anthracite coal fields of the country, and thus acquired the power to regulate both the production and the movement of that commodity. As the combination covered both the production and the transportation of coal, the companies became their own eveners.

It was held by the advocates of this gigantic undertaking that only

by obtaining control of the production could the coal-carrying roads prevent the frequently recurring and protracted periods of unbridled competition, during which the prices of coal and the rates for its transportation became unremunerative.

It was found, however, that, with the expanded powers and widened influence of the combination there were always outlying and adverse conditions not subject to control.

Not the least of the difficulties to be met in the administration of a great combination touching the material interests of the people at a thousand points, is the fact that with the enlargement of its powers it becomes more and more amenable to public opinion, and that when it assumes the form of a monopoly with respect to any matter affecting the people generally, it becomes subject to a degree of public accountability, almost, if not quite, as decided as that which attaches to the administration of governmental affairs.

After the disruption of the anthracite coal pool in August, 1876, the various roads, with their dependent coal companies, were operated independently of each other until January 1, 1878. During this period the rates for the transportation of coal were again greatly depressed. The several companies engaging in the traffic were unable to declare dividends. One of them was forced to the appointment of a receiver to take charge of its property. Another was obliged to obtain from its creditors an extension of the time for the payment of its floating debt, and was also forced to adopt other expedients designed temporarily to sustain its credit.

A second coal combination went into effect on the 1st of January, 1878, and continued until the close of that year. This second apportionment was based upon an agreement as to the entire production and transportation of anthracite coal, embracing not only coal transported to competing points, but also all coal consumed in the coal regions or shipped to points on the lines of the several roads.

The following table shows the percentage of the total products allotted to each one of the seven coal-carrying companies:

	Per cent.
The Philadelphia and Reading Railroad Company	28.625
The Lehigh Valley Railroad Company	19.750
The Central Railroad of New Jersey	12.905
The Delaware, Lackawanna and Western Railroad Company	12.750
The Delaware and Hudson Canal Company	12.480
The Pennsylvania Railroad Company	7.625
The Pennsylvania Coal Company	5.865
Total	100.000

The execution of the arrangement was intrusted to a board of control, and the accounts of production and transportation were kept by an auditor, upon the basis of whose statements the monthly adjustments under the agreed division of the business were made.

This second apportionment continued until December 31, 1878, when it was disrupted in consequence mainly of a refusal of one of the companies to accept terms agreed upon by the other companies.

The increased demand for coal consequent upon the general revival of business throughout the country has since enabled the various companies to maintain remunerative prices and rates in the absence of any apportionment agreement.

The only object of the present brief statement in regard to the Anthracite Coal Combination, is to present the general facts touching its organization and operations, without entering upon any discussion as to whether the rates charged for transportation or the prices of coal during the periods when an apportionment compact was maintained were reasonable or unreasonable, or as to whether such apportionments, or the measures adopted for maintaining them were in a politico-economic sense justifiable or unjustifiable.

Although the Anthracite Coal Combination is not now in existence, the foregoing statement in regard to it is believed to be of interest from the fact that it serves to illustrate a phase of the railroad system of the country.

It may also be remarked with respect to this great combination that it was based upon the quantity of coal mined and transported by each of the companies prior to the time of its organization, and upon circumstances surrounding each one of them at that time. It was impossible to make provision for the future. Changes in the extent of the demand for coal met by the various companies, materially affecting their relations to each other, of course involved the necessity of a modification of the scheme, and in the event of a contest its entire reconstruction upon the basis of the changed condition of affairs. This feature of instability attaches to every "pooling" arrangement.

4. CONCLUDING REMARKS IN REGARD TO TRANSPORTATION.

As the result of the various competitive influences of transportation and of trade, and of the possibility of increasing the actual number of competitors for the traffic furnished by the important trade centers of the country by the establishment of direct traffic over connecting lines, the question as to whether rates are reasonable or unreasonable is now determined mainly upon the ground of what transportation services are worth to the shipper, and not by their cost to the transporter.

The manner in which the charges for transportation services are determined, in so far as relates to inter-State or highly competitive traffic, is clearly illustrated in the case of the rail lines connecting New York and Chicago—these lines being the New York Central and Hudson River Railroad, the New York, Lake Erie and Western Railroad (formerly the Erie Railway), the Pennsylvania Railroad, and the Baltimore

and Ohio Railroad, through its eastern connections between the cities of Baltimore and New York. The cost of constructing these several lines differed widely, and the cost of maintaining and operating them also differs widely, but it is found in practice that the four lines must maintain very nearly or exactly the same rates for the carriage of freights between the two terminal cities. If the line which cost least, and which is maintained and operated at least expense, were to grant lower rates than any of the other lines, it would very soon secure all the traffic. Competition would not then exist, and there would be no occasion for an apportionment of traffic. In the case under consideration, the rates which can be secured by each one of the four lines under any possible agreement are not only greatly restrained, but, in many respects, absolutely determined by competitive influences of transport and of trade entirely beyond their control.

With respect to the transportation of grain and other bulky 'reights between Chicago and New York, the rates which may be obtained on the four railroads are determined by the rates which prevail on the water route composed of the lakes, Erie Canal, and Hudson River. The rates which can be obtained on other classes of merchandise are also in a greater or less degree influenced by the possible competition of that cheap water line.

The fact that it is impracticable to determine the reasonableness or unreasonableness of freight charges upon the basis of the cost to the carrier, is clearly recognized by the courts of the country, first, because such a rule would lead to interminable economic investigations, both as to the actual cost of constructing and operating railroads, and as to whether they have in each new case arising been honestly constructed and managed; and, second, because a decision that the reasonableness of charges can be maintained upon the ground of the cost to the transporter of the service rendered, would, in effect, be an announcement that the public ought to pay such rates of transportation as shall enable the companies to realize a profit upon their investments in railroad property, no matter how unfortunately or injudiciously such investments may have been made.

The governmental measures which have been adopted in this country or in other countries for the regulation of freight rates, either in the direction of preventing exorbitant charges or unjust discriminations, have had very little, if any, reference to the cost of constructing or of operating railroads. The same thing is true when railroad companies unite in a pooling or apportionment scheme. In such cases the share of the traffic apportioned to each road has no relation whatever to its length, to the cost of its construction, to its characteristics with respect to gradients and alignment, the cost of operating, the relation of receipts to expenditures, nor any other question affecting the financial status of the company. The only question which is at all considered in making the apportionment is simply *the relative power of the different roads to secure traffic when the same rates prevail over them all.*

In practice, freight tariffs are framed and from time to time adjusted by railroad managers solely with reference to the two following considerations: *First*, the direct influence of the competition of rival transportation routes, and, *second*, all that is implied in the expression *what each commodity will bear*, by which is usually meant the rates which, under all the direct and indirect competitive influences of transportation and of trade, will yield the largest profit consistently with the object of stimulating production through the facilities afforded for transportation.

A railroad freight tariff is simply a grouping under five or six general classes of an almost infinite number of commodities, the cost of transporting no two of which is precisely the same. Evidently a classification of this sort is only a rough approximation towards the equitable graduation of freight charges according to the value of transportation service.

The commodities placed under each class differ widely as to their value with respect both to weight and to the space which they occupy, and as to the expense involved in their carriage and handling. The commodities placed in each class differ also as to the risk involved in their transportation on account of their being liable to breakage or decay. The determination of the question as to the class in which any commodity shall be placed is also influenced by the quantity carried and by other considerations of an economic or commercial character. Freight tariffs are evidently, at the best, but expressions of the practical judgment of those who frame them, and no quality of infallibility can ever attach to their decisions.

If to the performance of this duty is added that of conforming to equitable general rules expressive of the public judgment in regard to rates, there will be presented to the railroad manager no insuperable difficulty, nor any hardship of which he may justly complain, since the public judgment, however it may err during times of excitement, will always, in the end, be guided by the public conscience.

Discriminations.

Within the range of the discretionary power over rates exercised by railroad managers lie all those difficult and vexatious questions which are summarily comprehended in the term *discriminations*. This subject embraces very largely the practical question as to the relations of the railroads to the public.

Since, in a broad and general sense, the proper conduct of the affairs of life depends largely upon the observance of proper discriminations, the practical question which presents itself for solution in the framing of freight-tariffs, as well as in devising governmental regulations over such tariffs is not *whether discriminations shall or shall not be made*, but *how to discriminate*.

The following are some of the more important considerations upon which discriminations are based :

First. The establishment of lower rates for the carriage of commodities

in large than in small quantities. The economies of transportation indicate that differences in rates based upon this consideration are justifiable, and yet experience proves the importance of setting a limit to the discretion which may be exercised by railroad companies in this regard. A single car-load has been suggested as the unit of charges for the carriage of commodities of one kind. Evidently, unless some limit is set to the discretionary power exercised by railroad companies, the most unjust discriminations may be practiced as against small shippers, under the pretext that the quantity of any particular commodity transported affects the cost of such service. The practical determination of this question is a matter of detail, and cannot be treated of more at length in this report.

Second. *The granting of special rates to favored shippers.* This is one of the most objectionable forms of discrimination, inasmuch as it constitutes a direct interference with the freedom of trade, and is a flagrant violation of the well-established principle that the common carrier shall not discriminate in the matter of freight charges between persons shipping goods under like circumstances. Intelligent and fair-minded railroad managers condemn such discriminations, regarding the practice as merely an expedient to be resorted to during a war of rates.

Certain exceptions to the entire abolition of special rates are urged with much force. One of the most meritorious instances adduced is that of the establishment of a mining or manufacturing industry on the line of a road, where the fundamental condition to the success of such an enterprise is that it shall be granted special rates both for the receipt of supplies and for the shipment of its products during a specified period, generally for a number of years, the grounds upon which the special privilege is based being that such new enterprise must compete with similar enterprises located at points where the advantages of competition between transportation routes is afforded, and on roads, the magnitude of whose total traffic enables them to transport like commodities at very low rates. Measures of this kind appear not only to be justifiable, but to be desirable in the light of the public interests, as tending to the development of the resources of the country. Exceptions of this kind, however, and every other form of exception to the general rule of equal rates to shippers under similar circumstances, should be granted under the terms of general or of special legislation, or of some other governmental sanction in behalf of the public interests.

The manner in which, and the extent to which exceptions to the rule of equal charges to shippers under like circumstances shall be admitted will, of course, be the subject of widely different opinions, in consequence of the diversity of views which prevails as to how far infant industrial enterprises may be fostered by governmental aids and privileges which are in their nature protective and enabling. Perhaps in no other branch of railroad operations is there greater need than in this for the exercise of the functions of a technical tribunal, such as is supplied in Great Britain by a board of railway commissioners.

Third. *Discrimination with respect to through or competitive traffic and local or non-competitive traffic.* The differences which prevail in all parts of the country between the rates charged for the transportation of through or competitive freights and for the transportation of local or non-competitive freights, in proportion to the distance carried, constitute the largest, the most complex, and the most difficult question connected with the subject of discriminations in rates.

To a very large extent competitive traffic is inter-State traffic, and to a very large extent the so-called "local" or non-competitive traffic is carried on within the boundaries of particular States, but the exceptions to this are so many, and they cover and influence so much, that it appears to be impossible to formulate any equitable rules which shall be applicable alike to these two general classes of traffic.

The principal part of the inter-State railroad traffic of the country is highly competitive, mainly as the result of combinations entered into between railroads to facilitate direct shipment over connecting lines. As already stated, such combinations have been formed in order to meet pressing commercial demands, and they have not only been encouraged but sanctioned by State and national legislation.

The reduction in through rates which has followed the formation of such combinations has already been noticed in considering the subjects of competition and the pooling or apportionment of traffic.

"Through rates" on railroads are also influenced and regulated by the competition of water-lines and of rival markets both in this country and in foreign countries. For instance, the rate on grain from Chicago to New York is influenced by the price of grain at Odessa, as well as by the cost of its transportation from Odessa to London. The economies of transportation are also largely in favor of "the low rate for the long haul," in all cases where the quantities to be moved are large and supply a considerable part of the business of the road engaging in the traffic.

To a great extent these commercial and economic conditions have had the effect of eliminating the value of distance as an element of the cost of transportation, the tendency being constantly towards a parity of freight charges as well as of prices.

But the great reductions in through rates resulting from railroad wars were the cause of most unjust discriminations as against local rates. The same causes produced very marked discriminations in favor of certain cities as against their competitors in commerce; causing widespread dissatisfaction and complaint in various parts of the country. These evils have, however, been greatly abated and in many instances have entirely ceased, since the railroads have turned from an attitude of hostility towards each other to one of amity under apportionment schemes.

As the result of the low rates of transportation which have prevailed with respect to the carriage of surplus agricultural products of the

West, an enormous inter-State commerce as well as foreign commerce has been developed.

In very many cases producers in the Western and Northwestern States are now more favorably situated with respect to the seaboard markets and to the markets of Europe, than are many of the agricultural producers in the Atlantic seaboard States.

Complaints against apparent discriminations of this nature are heard in all parts of the country. Each case embraces the distinct problem as to whether the differences between the rates referred to are or are not justifiable under the various commercial and economic conditions which have already been noticed and commented upon.

The question in each case as to whether the discrimination is just or unjust, is, of course, subordinate to the more complex question as to how far such discriminations are dictated and enforced by the economies of transportation by the regulative influence of cheap water lines, by the competition between rival railroads and by the restraining influence of the competition between rival markets. The answer to the question also involves the inquiry as to how far such discriminations are caused by a reckless or unjustifiable exercise of power over local rates by railroad managers, in their efforts to recoup losses incurred in the conduct of their "through" or competitive traffic.

The question as to the relative rates which shall prevail to and from different localities with respect to the different classes of freight, is one of national importance, affecting vitally the interests of agriculture, of manufactures, of mining, and of commerce. Its practical determination under our present system of transportation, devolves entirely upon railroad managers. This large discretionary power has come to them by the force of circumstances, and not of their own seeking. Not only are railroad managers obliged to determine the degree of consideration which shall be given to the various commercial and economic circumstances which surround them, but they are also compelled to pass upon such vitally important questions as the economic and commercial laws governing production and trade, subjects which are commonly supposed to fall within the range of practical statesmanship. To assert that this enormous power should not be remitted entirely to an interest (that of transportation), giving employment to only 2 per cent. of all the laborers in the country, and controlling interests representing only about 8 per cent. of the property value of the country, amounts to an assertion that the other interests should have a voice in this matter through some governmental agency competent to deal with it, and authorized to represent the interests of the whole country in the subject of transportation.

Under existing circumstances relative to the mixed jurisdiction of the State and national governments over the internal commerce of the country, the question as to the scope and the proper limits of the practical

exercise of governmental authority touching discriminations of this character is an exceedingly difficult one. A large part, of the so-called local traffic of the railroads of this country is subject to the absolute and exclusive control of State legislation. This has been clearly announced in a decision of the Supreme Court of the United States. But a considerable part of the local traffic, as well as the principal part of the through traffic of many railroads, is in its nature inter-State commerce, and therefore subject to regulation only under the provisions of national laws. The Federal courts have not failed to observe the practical impotency of State legislation to correct those abuses in freight charges which most seriously affect the public interests, and the question has arisen as to whether a power in a State government so limited can be beneficially exercised in the absence of any exercise of the authority of the national government.

While complaints as to unjust discriminations with respect to different localities are heard from producers and shippers, railroad managers and others who speak in behalf of the railroad interests, freely concede that such discriminations constitute a great public evil. They assert, however, that the causes of the difficulty are beyond their control.

The Railroad Gazette of New York, in an article entitled "The legal sanction of combinations," says: "The enormous differences between through and local rates, which are the inevitable consequences of the present method of doing things, are the occasion of most of the dissatisfaction with railroads, and they are, doubtless, the cause of much actual injury to a great many persons."

Mr. Robert Garrett, of Baltimore, a gentleman having an extensive practical acquaintance with railroad affairs, in a recent magazine article referred in the following terms to the ungoverned and ungovernable competition for eastbound traffic between the trunk lines which connect the West with the seaboard, and to the discriminations which inevitably prevail as the results of such contests: "While this is the result of competition in through freights, the local traffic and that to and from non-competing points are forced to submit to unreasonable discriminations at the hands of the railway companies. * * * This has been the case for years. Formerly the people were content with protests, but recently they have assumed a more determined and aggressive attitude, and their efforts to secure a recognition of their claims by the railway companies have culminated, as known, in appeals to State legislative bodies for relief from the alleged discriminative policy."

In a communication addressed to the special committee on railroads of the New York legislature by the presidents of the New York Central and of the New York, Lake Erie and Western Railroad Companies, under date of April 18, 1879, those gentlemen, after alluding to the great differences which prevail between the rates on through and on local traffic, say:

"The undersigned are also fully aware and freely acknowledge that

there are great evils arising from the absence of a proper limit to competition, and the abuse thereof, and that unnecessary injury is thereby done to the interests of many people, to large sections of this and other States, and to the owners of railroad property ; but they as strongly assert that the rectification of such abuses, and the preservation from the injury inflicted upon individuals and communities, are beyond their personal control, and equally beyond the power of the legislature of the State of New York, or of Pennsylvania, or of any other or of all the States to control. The abuse of a proper principle and the injury to the people is as broad as the nation, and unless there is some power in the national government, and some way by which such abuse and injury can be rectified by the Congress of the United States, there is no remedy, and all persons, communities, and States must accept the position and wait for time either to furnish a remedy or permit the great laws of trade, now trammelled by destructive competition, to work out the result."

At the present time railroad managers appear to be quite generally of the opinion that the only practicable remedy for the evils of unjust and improper discriminations, is to be found in a confederation of the railroads under governmental sanction and control, the principle of the apportionment of competitive traffic being recognized as a feature of such a confederation. This is a subject worthy of careful investigation.

Any adequate determination of the question as to the relation of the railroads to the public interests must take into account the dual nature of railroad companies, as corporations charged with the duty of exercising the public function of supplying highways of commerce and as private institutions, entitled to protection and to the privileges of securing profits upon the capital invested in them. The solution of the question must also take into account the peculiarity of the railroad as a highway of commerce, all the vehicles employed upon it being of necessity placed under one central organization.

In view of all these difficult questions, it must be confessed that a satisfactory solution of the railroad problem is yet involved in obscurity. The subject is a broad and complex one, touching the public interests in many ways. It demands a patient and thorough investigation in all its bearings. Statistics and other facts may greatly aid in reaching a proper determination of the question, but its satisfactory solution will also require all the light which can be thrown upon it by persons learned in the law and in the principles of government, by persons well-informed as to the practical management of railroad interests, and also by persons who are competent to express intelligent views in regard to so important a question in its relations to the interests of agriculture, of manufacturing, of mining, and of commerce.

5. THE GOVERNMENTAL REGULATION OF RAILROADS.

No important measures have been adopted during the last two years by any of the State governments or by the national government in regard to the regulation of railroads. The subject has, however, commanded a more general and intelligent interest than at any previous period. Experience has proved that certain of the restrictive measures adopted a few years ago by the legislatures of some of the Western States were, in their practical workings, detrimental to the producing and commercial interests of the country, and at the same time injurious to the railroad interests. Nevertheless, the legislative acts regulating freight charges which have been adopted in this country have generally had a salutary influence as reformatory measures. The benefits of such acts have resulted rather from their moral influence in restraining and preventing abuses than from their direct effect in enforcing the right and correcting the wrong. The railroad companies have been constrained to explain the principles upon which their freight tariffs are based, and thus the public have been enabled to gain much valuable information as to the distinction which exists between just and unjust discriminations and between practices which are based upon economic considerations and sound commercial principles, and such as are indefensible and therefore constitute abuses of the rights and privileges conferred upon the companies.

A knowledge of the mistakes made in the earlier attempts at legislation affecting freight charges and the general conduct of the freight traffic of railroads, has had the effect of inculcating the importance of proceeding cautiously and upon a careful and thorough investigation of the whole subject. However much the popular judgment touching the methods to be adopted for the governmental regulation of railroads may at times have erred, especially in its tentative efforts in that direction, it is certain that there can in this country be no permanent wrong done in the enforcement of remedial measures, since public sentiment will always be guided by the public conscience, not only in protecting the public interests against abuses practiced by the railroad companies, but also in dealing with the interests of the railroad companies. Conformity to well-considered and judiciously-devised rules touching matters of a practical nature in railroad management can therefore entail no hardship upon those to whom such rules apply.

UNIFORMITY OF RAILROAD ACCOUNTS AND THE PUBLICITY OF THE ACTS AND DOINGS OF RAILROAD COMPANIES.

As all intelligent action touching the regulation of railroads must be based upon accurate, reliable, and duly-authenticated information, it is essential that publicity should be given to the operations of railroad companies in so far as they relate to or affect the public interests. For

the purposes of comparison, it is important that in the accounts of railroads from which such information is collected, a certain degree of uniformity should be observed as to the manner in which they are kept, and also as to the manner in which the necessary returns are made. This fact has been fully realized by railroad commissioners in the preparation of their annual reports.

The State of New York was the first to require the annual publication of railroad returns in conformity to a prescribed schedule, the law upon the subject having been enacted in the year 1850. Other States have since enacted similar provisions.

Under the State railroad commissioner system, the collecting of information in regard to railroads has been greatly improved. The inquiries relate to the financial status and the acts of the several companies, to the physical characteristics of the road, to the locomotive, track, and freight equipment, to the number, nature of employment, and compensation paid to the various employes, and to the freight and passenger traffic of the several roads.

On the 12th of November, 1878, a convention of railroad commissioners of several of the States was held at Columbus, Ohio, mainly for the purpose of conference upon this subject. A committee on bookkeeping and accounts was appointed, and certain railroad accountants were requested to act with the committee as experts. At a subsequent convention of the commissioners held at Saratoga Springs, N. Y., June 10, 1879, that committee presented a report embracing certain general rules, and a form of returns. The report of the committee was unanimously adopted by the convention, and the railroad accountants were invited to join in a recommendation of the new form of accounts to the railroad companies of the several States. A copy of the proposed rules and form may be found on page 196 of the Appendix.

It is believed that the reform thus suggested and urged upon railroad companies by the State railroad commissioners would, if generally carried into effect, tend to protect the interests of railroad companies, by affording to the public a better understanding of the condition of the roads, and thus prevent dissatisfaction. So long as the policy of concealment is pursued, an ever-jealous public will be apt to be influenced by its prejudices and suspicions in the formation of opinions as to the operations of railroad companies.

6. INFORMATION FURNISHED BY EXPERTS.

In compliance with the terms of the law requiring the preparation of this report, the services of several gentlemen, well informed in regard to the commercial and transportation interests of the country, have been secured for the purpose of furnishing statistical and other necessary information. A large part of the contributions of these experts may be found in the appendix to this report. Attention is especially directed

to the interesting and valuable statements prepared by the following persons :

Mr. F. B. Thurber, merchant, of New York City, a gentleman who has given much attention to the transportation interests of the country.

Mr. Simon Sterne, counselor at law, of New York City, a gentleman prominently known in connection with the public discussion of matters touching the interests of transportation and commerce.

Mr. George H. Morgan, secretary of the Merchants' Exchange of Saint Louis, Mo.

Mr. H. G. Hester, secretary National Cotton Exchange of New Orleans, La.

Mr. Charles Randolph, secretary of the Board of Trade of Chicago, Ill.

Mr. Sidney D. Maxwell, superintendent of the Merchants' Exchange, Cincinnati, Ohio.

Mr. W. H. Miller, secretary and treasurer of the Board of Trade, Kansas City, Mo.

Mr. James M. Swank, secretary of the American Iron and Steel Association, Philadelphia, Pa.

Mr. John C. Welch, editor of the Monthly Petroleum Trade Report Oil City, Pa.

Mr. S. H. Stowell, editor of the Petroleum Reporter, Pittsburgh, Pa.

Col. Milo Smith, Clinton, Iowa, a gentleman who has had a large experience in the management of railroad interests.

Mr. George U. Porter, secretary of the Board of Trade of Baltimore, Md.

Mr. E. W. Perry, editor of the American Stockman, Chicago, Ill.

Mr. J. W. Midgley, railroad commissioner, Chicago, Ill.

Hon. Hamilton A. Hill, secretary of the National Board of Trade, Boston, Mass.

Mr. William Thurston, secretary of the Board of Trade, Buffalo, N. Y.

Mr. C. H. Pope, of Louisville, Ky., a gentleman well informed in regard to the commercial and industrial interests of that city.

Mr. J. D. Hayes, Detroit, Mich., a gentleman who has had a large experience in the management of railroad interests, and has taken a prominent part in the discussion of matters relating to trade and transportation.

Mr. J. R. Dodge, a gentleman who was for several years statistician of the Department of Agriculture, and is widely known on account of his knowledge of the agricultural interests of the country.

Valuable information has also been furnished by Mr. Albert Fink, railroad commissioner of New York City, and Mr. Virgil Powers, commissioner of the Southern Railway and Steamship Association of Macon, Ga.; Mr. George Frazee, surveyor of customs, Burlington, Iowa, and Mr. John H. Jones, of the Reading Railroad Company, Philadelphia, Pa.

APPENDIX

TO

REPORT ON INTERNAL COMMERCE.

APPENDIX No. 1.

INFORMATION FURNISHED BY MR. F. B. THURBER, OF NEW YORK, IN REGARD TO DISCRIMINATIONS IN RAIL RATES AGAINST THAT CITY, THE LINE OF POLICY PURSUED BY THE NEW YORK TRUNK LINES, THE OPERATIONS OF THE WEST-BOUND APPORTIONMENT SCHEME OF NEW YORK, TERMINAL CHARGES, AND THE RAILROAD PROBLEM OF THE COUNTRY, WITH A STATEMENT IN REGARD TO THE INFLUENCE OF CAPITAL TOWARDS DETERMINING THE COURSE OF COMMERCE, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS.

N. B.—The following inquiries were originally addressed to Mr. Thurber in May, 1878, and his reply was dated May 21, 1878. He has, however, revised the whole and returned it to this office under date of June 13, 1879.

INQUIRIES ADDRESSED TO AND ANSWERS FROM F. B. THURBER, OF NEW YORK.

Question 1. Do you regard the establishment and maintenance of lower rates between ports in Europe and points in the interior of the United States than the combined ocean rate from the foreign port to New York, and the railroad rate from New York to the interior point, as in the nature of an unjust discrimination; and, if so, what measures, in your opinion, should be adopted for preventing it?

Answer. I regard the establishment and maintenance of lower rates between ports in Europe and points in the interior of the United States than the combined ocean rate from the foreign port to New York and the rail rate from New York to the interior points as an unjust discrimination, for the reason that the two methods of transportation are entirely separate and distinct from each other, bulk having to be broken and the goods handled at the end of the ocean voyage in any event. There can be no more economy of transport by making a through rate in Liverpool to Chicago, via New York or any other port, than there is in making the ocean rate separately and allowing the railroad lines to make the rate from the seaboard to Chicago. This, of course, is under the supposition that in both cases the goods are transferred from the ship to the car in the same manner, whether on a through bill of lading or not. In 1877, from January until September, through freights from Liverpool to the West on fourth-class goods were carried at 12 shillings and sixpence net per ton, equal to 13½ cents per hundred pounds, to Chicago, and 14 to 15 shillings net, or 15½ to 16½ cents per hundred pounds, to Saint Louis; while at the same time ocean freight rates to New York alone from Liverpool were 12 shillings and sixpence and 10 per cent. prime for the same goods per ton; or, in other words, New York merchants were charged 10 per cent. more for the carriage of the same goods from Liverpool to New York than Chicago merchants were charged for taking the same goods (through New York) 1,000 miles further; the effect of this being to forcibly and abruptly take from the merchants of New York trade which naturally belonged to them and give it to the merchants of Chicago. I do not think that any common carrier has the right to thus abrogate or be a party to abrogating the natural advantages which a community may enjoy. Such practices unquestionably make investments uncertain, discourage legitimate business enterprise, and should be prohibited by law. Discrimination of this kind is a protection of foreign manufactures against home manufactures; for instance, the hardware manufacturers of Birmingham and cotton manufacturers of Manchester can lay down their products in our Western markets cheaper than the manufacturers of the Eastern States can. The former owe no allegiance to our government, pay no taxes, and are commercial "carpet-baggers"; the latter are American citizens, and are entitled to fair treatment. The above is an example of the constantly-recurring anomalies in commerce at the present time, resulting from the control of steam-power by large organizations of capital, and which must be regulated in the interest of the public unless we would build up class distinctions and perpetuate a moneyed aristocracy. I would prohibit such practices by State and, if necessary, by national laws, against charging

more for the carriage of freight for a less than for a greater distance, except where the principle of reduced cost entered into the question, and this is not the case in the instance above given. It must not be confounded with the *pro rata* principle in land transportation, because in this the principle of cost does enter largely into the question.

Question 2. Do you consider that the discriminations above mentioned have resulted from competition between ocean lines in connection with the New York Central, the Erie, the Pennsylvania, and the Baltimore and Ohio Railroads, or that they are the result of the efforts of those roads to meet rates made by the steamer lines in connection with the Grand Trunk Railroad, and its connecting lines from Montreal, Portland, and Boston?

Answer. I understand the above discrimination to have been the result of the efforts of the trunk lines to meet rates made by the steamship lines in connection with the Grand Trunk Railroad and its connecting lines from Montreal, Portland, and Boston.

Question 3. Is it not true that the average steamer rates which prevail between New York and Liverpool are less than those which prevail between Boston and Liverpool, or between Philadelphia and Liverpool, or Baltimore and Liverpool?

Answer. Average steamer rates between New York and Liverpool are generally lower than between other seaboard ports, the reason for this being that in many respects New York is a more desirable port; the principal reason being, perhaps, that it is more accessible, and freights both ways are more easily obtained.

Question 4. Referring to the results of the recent discrimination in rates as against New York and in favor of Boston, which prevailed during the year 1878, leading to a large diversion from New York to Boston, please to state, with as much particularity as you may be able, the principal commodities or classes of commodities thus diverted, stating whether they were of domestic or of foreign production; if of American production, in what State or States produced, and if of foreign production, of what countries they are the product. It is the object of this inquiry to ascertain as nearly as possible the practical effect of such discriminations against New York. You may elucidate the subject in any manner you may deem proper, if you do not think a specific answer to the inquiry will properly bring out the facts in the case.

Answer. There has generally been a small permanent discrimination in west-bound rates against New York and in favor of Boston, owing to the fact that the Grand Trunk is considered a less desirable route by which to ship goods, and consequently in order to get business it has to offer inducements in the way of a lower rate. When this inducement has been small it has principally affected the heavier and least valuable class of goods, but when rates are much less, as they have been several times (the last instance being in January, 1878), the difference has been so great that almost all classes of goods have been equally affected, and not only were goods shipped from New York to Boston and from thence to Chicago, by the way of the grand trunk line, *for less than half the New York rates*, but goods were shipped from New York to Boston and back again through New York over the Erie road to Chicago at rates far below those ruling from New York. As to whether the goods thus affected were mostly of foreign or domestic product, I should say perhaps of about equal amount, foreign goods of all varieties used in the West as well as goods manufactured in New York and all the Eastern States being affected. As you state in this question that the object is to ascertain as nearly as possible the practical effect of the recent discrimination against New York, I would add that the damage occasioned by these anomalies in our transportation system is not confined to the actual number of tons of freight carried out of Boston during the period when rates are less, but there is also a substantial injury done to the prestige of New York as a commercial center, and in the general shaking up and disturbance which they occasion to the settled channels of trade.

Question 5. In view of the fact that New York City is practically the trade center of a very large proportion of the manufacturing enterprises of the New England States, do you not consider that the commerce of New York from these sources is largely promoted by the low rail rates on Western productions over the New York Central Railroad and its connections to the towns of New England, and by the low rates for the transportation of the manufactured products of the New England factories to all points at the West and Southwest over the same roads?

Answer. I think that the business of New York is promoted by equitable rates from the West to the New England States and from the New England States to the West, as, unquestionably, New York shares to a greater or less extent in the prosperity of New England; but I do not think that this is any reason why New England should have a lower rate of carriage than New York, or even as low, because, laying aside the influence of distance on through business, the volume of business done at New York entitles her to lower rates of transportation than any other seaboard city. It is well known that the cost of transportation by rail decreases faster as the volume of business increases than the cost of doing any other business; or, in other words, a large business in transportation can be done cheaper in proportion than a large business in almost any other branch of commerce.

Question 6. Please to present such facts as may appear to you to be of value in order to indicate the nature and extent of the discriminations made in favor of jobbing merchants at interior points on shipments from New York, and explain how such discriminations operate with respect, first, to the interests of small purchasers in the interior; second, to the commercial interests of New York, and, third, to the interests of the transportation line.

Answer. It has been the practice for a number of years for all the principal railroad lines running from New York to the West to make special contracts with wholesale houses in the interior, at almost all principal points, at a rate far below their printed schedule of rates, which, in the absence of agreement, the public generally have to pay. The following are illustrations of the great difference thus made, and which is by many believed to be excessive:

(From report of committee on railroad transportation of the New York Chamber of Commerce, February 28, 1878.)

"An important discrimination, also, against the jobbing trade, particularly of this city, is in the form known as the *special contract system*, by which wholesale houses in the interior are given rates from fifty to seventy-five per cent. cheaper than the general public; and for illustration on this head we refer to annexed schedule, marked E."

SCHEDULE E.—SPECIAL CONTRACTS.—"The winter schedule rate from New York to Syracuse is 50 cents per 100 pounds for first-class goods, 40 cents for second-class, 34 cents for third-class, and 23 cents for fourth-class, and these rates the great mass of people have to pay; but a few favored wholesale dealers in Syracuse are given contracts by which all classes of goods are carried for 12 cents per hundred pounds, as against the 50, 40, 34, and 23 which the public generally have to pay, and the same is true of all the other jobbing centers of the State. The same principle also holds good in the treatment which the great mass of the people of the State of Illinois, and, indeed, all other Western States, are forced to submit to. The reduced rates of the pooled lines to Chicago are now 75 cents per hundred for first-class, 60 cents for second-class, 50 cents for third-class, and 40 cents for fourth-class (lately \$1, 80 cents, 60 cents, and 45 cents, respectively), while favored parties have been given contracts running through the year at 25 cents per hundred on all classes."

This form of discrimination affects,—

First. The small purchasers in the interior, virtually prohibiting them from buying in the most favorable markets, for they are discriminated against so largely that they are obliged to stay at home.

Second. The commercial interests of New York are unfavorably affected, for its merchants are thus obliged to sell their goods to the wholesale houses in the interior, who are thus favored in freights, at such prices as they may see fit to give. Practically the wholesale houses in the interior are subsidized so that they may break down the wholesale houses on the seaboard and monopolize the trade of the retail merchants of the interior.

Third. The interests of the transportation lines are unfavorably affected, for they are virtually concentrating the business in the hands of a few wholesale merchants, who pay them very low rates, instead of doing business with a large number of smaller merchants who would be glad to pay them a higher and reasonably remunerative rate, but who are prevented from buying their goods in the seaboard markets, as they used to do, by the prohibitory rates which are maintained. The passenger traffic of the roads is also greatly injured by this practice, as the larger the number of merchants who do business with the seaboard business centers, the larger would be the number of business men travelling, and I therefore believe it not only to be an unjust discrimination against the interest of the wholesale merchants on the seaboard, but also against that of the smaller purchasers in the interior, and of the roads themselves. While I do not think it feasible or right to require common carriers to transport a small quantity of goods as cheaply as they would a larger quantity, yet I believe with Mr. Fink, that a car-load should be the maximum quantity required to secure the lowest rate, and I believe further, ~~that shippers of less than a car-load should only be charged the additional rate which it costs to transport goods in smaller quantities.~~ It is unquestionably true that the great mass of the people have been charged a much higher proportionate rate than they should have been charged, in order that an unreasonably low rate could be given to a few favored individuals. I believe that the equitable adjustment of this matter is of greater importance than almost any other single defect in our transportation system, and it should receive the careful examination of experts in order to determine what additional rate it costs to receive, transfer, and deliver quantities less than a car-load as compared with a car-load, and then with this light an equitable adjustment should be made.

Question 7. In what manner and to what extent are the interests of trade injuriously affected by sudden and unadvertised changes of tariff rates? In your opinion, how long should any proposed change in a tariff sheet be advertised prior to making the changes?

Answer. Sudden and unadvertised changes in the rates for transportation, if frequent, are unquestionably injurious, as it makes commerce somewhat of a lottery, and it would probably be more beneficial to trade interests if changes in the rates of

transportation did not take place more frequently than twice per year. I have not fully considered the question of how long a notice ought to be given in any contemplated change in rates, but am under the impression that ten days would be a reasonable period for such notice. This would usually prevent loss to shippers on contracts which had been taken based on ruling rates, and would not be so long as to embarrass for any considerable period the traffic of the roads by withholding shipments in case of a contemplated decline or hurrying them forward in case of a prospective advance.

Question 8. In your opinion, what action, legislative or otherwise, is necessary in order to prevent any departure from published rates by any one of the various methods of cutting?

Answer. It seems to me probable that, in case uniform rates to all shippers under similar circumstances were once prescribed by law, carriers would naturally and easily fall into line and comply with the law. If, however, experience should prove that there were many ways of avoiding the law, legislative ingenuity ought to be able to meet these evasions, the same as it has in our internal-revenue laws and many other laws by which society is regulated.

Question 9. Can you formulate a general rule which, in your opinion, should limit discriminations in freight charges in so far as relates to quantity carried? Mr. Albert Fink has expressed the opinion that this discrimination should be limited to single car-load lots, beyond which limit an absolute uniformity of rates should be observed.

Answer. I think that the line as drawn by Colonel Fink, at the quantity of one car-load, is perhaps the first practicable step to be taken in equalizing charges for transportation; but, as stated in answer to question 6, Colonel Fink does not go far enough in this direction to do justice to the great mass of shippers who, unquestionably, are those that usually ship in less quantity than one car-load. The probable difference in the cost of transporting merchandise in quantities of a car-load and in less quantities should be ascertained as nearly as may be by examination of the question by experts, and this additional cost and no more should be charged to such shippers. The principle of "*equality on the 'King's highway'*" should be here applied as far as possible. The right of the citizen must here limit the operation of the law of wholesale and retail; the vote of the small shipper had as much to do with conferring the franchises under which railroads are operated as did that of the large shipper, and from this point of view he is entitled to as much consideration.

Question 10. Referring to the second proposition on page 6 of Report of Chamber of Commerce Committee on Railroad Transportation, please to state what general or special remedy was therein contemplated.

Answer. That touched upon in answer to question 1, namely, that, if necessary, legislation must be invoked, not only at New York, but at all the ports, to remedy this state of things.

Question 11. Do you regard the recent discrimination in rail rates in favor of Boston as a measure intended by the railroad managers to be inimical to the interests of New York City, or do you regard such discriminations as the result of a contest by New York roads for the purpose of forcing rival roads out of Boston to a conformity with the established New York rates?

Answer. The recent (1878) discrimination in rail rates in favor of Boston was unquestionably not intended to be, by the railroad managers, inimical to New York City, but they were the result of attempts by the pooled trunk lines to force the Grand Trunk Road into maintaining a higher schedule of rates than the managers of that road saw fit to maintain, or, looked at from a New York railroad manager's standpoint, it was occasioned by attempts to meet the competition of the Grand Trunk Road. This, however, is not in all respects a fair statement of the case, because the extreme low rates which ruled for a time were first made by the pooled lines as a punishment to the Grand Trunk Road for having carried at much higher rates, but which rates were somewhat lower than those established by the pooled lines.

Question 12. Please to present a statement showing the relative terminal charges at Boston, New York, Philadelphia, and Baltimore, with reference to certain specific commodities. By this is meant the terminal charges as they affect particular kinds of commodities in their passage through New York, first in the course of trade, and second, by direct transshipment. In this connection please to present two illustrations or sets of illustrations going to show the relative terminal expense at Boston, New York, Philadelphia, and Baltimore. First, on commodities imported from Europe and to be shipped directly to interior points; second, on commodities placed in warehouse at New York prior to shipment; third, on commodities which pass through the New York market.

Answer. This question is, perhaps, the most difficult of all those asked to answer intelligently, and it is almost impossible to answer it comprehensively, as it involves not only what is known as terminal charges, but the whole routine of commerce at the four principal seaboard cities, both in import and export business, and in order to give a correct idea, it would have to embrace all the principal items of merchandise. I have, however, consulted with a large number of prominent merchants in different

branches of trade, with the following general result: as regards ships, while the specific charges of pilotage, towage, wharfage, supplies, &c., vary in some degree at the different ports, there are corresponding advantages and disadvantages which about equalize each other. As regards the terminal charges on merchandise, New York has in the past been at a disadvantage as regards grain and other produce arriving from the West by rail and destined for export, and also on the heavier kinds of imported goods *en route* to the west, for the economical handling of which it was necessary to bring cars and ships together; but, as stated elsewhere, these have been and are being remedied. The foregoing applies more especially to the second division of the question, viz, where goods have direct transshipment from ship to car, or *vice versa*; but as regards those charges upon commodities "in their passage through New York in the regular course of trade," the question of merchants' profits is involved, and this is of far more importance on the great miscellaneous class of goods than the mere attendant expenses, such as cartage, storage, labor, &c., which do not differ materially in the different seaboard cities, and in the aggregate amount to an exceedingly small percentage upon the cost of valuable products. On this great miscellaneous class, which comprises a thousand and one items, New York possesses substantial advantages. Most of the large manufacturers, both foreign and domestic, maintain agencies here for the sale of their goods, which is thus done upon the least possible margin of profit; varieties are more extensive, affording the best possible selection, and here new and attractive styles are first shown. These advantages, with the aggregation of capital which has settled here, have resulted in attracting buyers to this market and holding in a much greater degree than could have been expected the trade of the nation, in the face of the persistent discriminations which have been made against New York by her railroad lines. This discrimination has, of course, resulted greatly to the detriment of her distributing merchants, who have had to relinquish a portion of their legitimate profits in order to make up for these discriminations and to offset the inducements offered by competing cities. In conclusion I would say, as in the answer to question 16, that there has been some misapprehension and too broad an application of the agitation by the citizens of New York for improved terminal facilities, as it was designed principally to secure improved facilities for the handling of grain arriving by rail, and other heavy goods for which direct transshipments from ship to car and from car to ship were a necessity.

Question 13. Please to state generally those defects in the terminal facilities of New York City which injuriously affect it, in so far as relates to trade in which New York competes with Boston, Philadelphia, and Baltimore.

Answer. I know of no defects in the terminal facilities of New York, except those heretofore resulting from our inability, or more properly neglect, in bringing cars and ships together; this applies principally to the handling of grain arriving from the West by rail designed for immediate export, and to the heavier class of imported goods destined for consumption in the West upon which it is also necessary to make direct transfer from the ship to the car. We do not feel the first during a great part of the year, owing to the superior facilities enjoyed by New York in having the Erie Canal, the canal-boats bringing this staple being at once towed alongside ships by which it is to be sent abroad. And as regards imported goods destined for the West, the recent authorization of the use of the Belt Line of railroad which runs along almost the entire water front of the city has already enabled a beginning to be made in loading these varieties of goods directly from the ships upon the cars without cost of transfer, and the full utilization of these facilities will place New York upon an equality with all competing cities.

Question. 14. In your opinion, has not the rapid diffusion of commercial information by means of railway postal service and the telegraph, in connection with the possibility of rapid transportation afforded by railroads, rendered it necessary that there should be at every city on the seaboard an immediate contiguity of the railroad, the warehouse, and the sea-going vessels, and the establishment of such facilities in the way of mechanical appliances and business arrangements as will insure the lowest possible cost of transfer from one vehicle to another? In this connection will you please to state how far, in your opinion, the facilities furnished at New York fail to meet this requirement?

Answer. Unquestionably the rapid diffusion of commercial information tends greatly to equalize values in different commercial centers, and in connection with the possibility of rapid transportation prevents the realization of large profits to the distributor and greatly reduces prices to the consumer. In consequence of this it has become necessary to reduce to the minimum all charges upon commerce, and the most approved appliances and facilities are also necessary. As to the defects in the facilities furnished at New York, they have unquestionably been unduly magnified. In enumerating the defects in the New York railway system many persons have entirely overlooked the great natural advantages enjoyed by New York in her magnificent harbor and extensive stretch of water front, which, taken in connection with that great source of wealth, the Erie Canal, has sustained the commerce of New York under the discrimination of her railroads, the burden of bad municipal government, and the enterprising

competition of other seaboard cities. There has been a great cry that what New York needed was elevators; but so far as the agitation by the citizens of New York was concerned it was simply for elevators at the termini of the different railroads in connection with the Western system of grading grain. It may not be generally known that New York has more elevators than any other city in the Union, but they consist principally of stationary elevators at the various grain storage warehouses and floating elevators for the transfer of grain from canal-boats into sea-going vessels, this latter variety moving about the harbor from point to point by their own steam and constituting a most effective instrumentality in our terminal facilities. The New York Central Road has also one first-class elevator for receiving and storing the grain transported by that road, and another is in process of construction. With these and the system of grading grain, which has but just fairly come into general use, New York cannot be said to be deficient in terminal facilities, at least those for the handling of grain.

Question 15. What has been the general effect of the west-bound apportionment scheme from New York upon the commercial interests of that city, with special reference to those interests in which it competes with rival seaboard cities, and what, in your opinion, will probably be the effect of this apportionment scheme upon the future commercial interests of New York City?

Answer. I believe that the general effect of the apportionment scheme out of New York, commonly known as the pool, upon the commercial interests of this city, with special reference to those interests with which it competes with rival cities, has been unfavorable; not that an apportionment scheme is bad in all its features, but the rates at first established were so high that circuitous routes could cut largely from the pool rates and still make money, notwithstanding their unfavorable location; second, owing to the number of lines in the apportionment scheme it involved the transfer of some freight from one line to another without the concurrence of shippers. This, in some cases, resulted in delay and inconvenience to the receiver of the goods, and savoring as it does somewhat of arbitrary control over matters which had heretofore been directed by shippers or receivers of goods, it was an element of dissatisfaction which dealers in rival cities did not fail to magnify and make the most of. (As an illustration see letter clipped from the York York "*Shipping List*.")

"RAILWAY MISMANAGEMENT.

"EDITORS SHIPPING AND COMMERCIAL LIST:

"GENTLEMEN: As you represent, as well as any New York journal I know of, the business men of New York, I desire to call your attention to a matter that is driving the trade away from your city faster than anything I ever heard of. It is the 'pooling' system of the trunk railroads out of your city. The Western buyer now has no choice of the way his goods shall come. The superintendent of the 'pool' directs and divides freight to suit himself. Now, if all railroad companies did their business with equal promptness and dispatch, and in a business-like manner, there would be no complaint. But they do not. Some lines will bring goods from New York to this point in four or five days, and settle any loss for damages promptly, while others will take as long as three weeks, and it is a hopeless case to attempt to collect a cent of damages from them. Some lines have pleasant, affable gentlemen for agents; others are represented by some blockhead of a relative of a high official, who leaves his business to a boy, and is hardly ever to be found in his office, or when found knows nothing of what he is hired to attend to. Now, to be forced to do business with such lines is an outrage. They were always forced to cut rates to get any business, and even then not get a fair proportion. We would rather pay more and do business with reliable lines. It is just the same with one of these freight lines as it is with a business house. A man would rather do business with a first-class reliable firm, and pay their price, than deal with one of those 'snide' concerns that is always playing sharp and selling inferior goods. I have always given the preference to the Merchants' Dispatch Line, and can safely calculate on getting goods in four days from New York. If we have any losses they settle them promptly. There are several other lines that do just as well—the Star Union for instance—but we started with that line, and as long as everything was satisfactory we made no change. Now we send an order by letter or telegraph to our merchant in New York to ship us so and so by Merchants' Dispatch. The merchants obey orders, but the Merchants' Dispatch gets more than their share of freight, according to the 'pool.' The superintendent of the 'pool' directs that my goods with others, be taken over to the Baltimore and Ohio, or Erie or some other road, and instead of getting my goods in four days I am out of them one, two, or three weeks. I have just received a lot of goods three weeks out, and damaged at that. I don't believe I will ever recover a cent of damages. Now this 'pooling' arrangement does not exist in Boston or Philadelphia, and we can order goods from either and designate the line we want them shipped by, and get them as ordered. We intend, therefore, to go to these places and buy our goods as far as possible. I sent orders for over \$5,000 worth of goods this week to Boston, rather than buy in New York where I have always bought my goods, rather than be subjected to the outrage that is now being

perpetrated by the railroad lines centering in your city. We shall avoid New York as much as possible until her merchants see fit to stand up and fight for their rights and that of their patrons. Why don't the lines 'pool' their passenger traffic the same way? Suppose a man was to go to the Erie Railroad and ask for a ticket to Indianapolis or Saint Louis, and be told they had disposed of their quota for that day, and he must go via the Baltimore and Ohio, or the Chesapeake and Ohio, or through Canada; it would not be long before people would give your city a wide berth. If the railroad lines want to combine and keep up freights, let them 'pool' their earnings, and give the shipper the privilege of sending his goods as he may choose. Whether the New York merchants know this or not I am not aware, but as it has been going on nearly a year, and they are apparently taking no steps to break it up, the only recourse a Western buyer has is to let New York severely alone. I bought over \$50,000 worth of goods in New York last year—a small amount—but there are more like me, and New York will get as little as possible this year.

"Very respectfully,

"SUBSCRIBER.

"INDIANAPOLIS, *March 29, 1878.*"

Had the rates of the pooled lines been fixed on a basis which would yield but 10 per cent. on the capital actually paid in by the stock and bond-holders, and all special contracts been abrogated, the apportionment scheme might have proved a substantial benefit, but there has been a strong feeling in the commercial community that it was an effort to abrogate by the power of a monopoly the ordinary laws of commerce, which laws, if left to work, would decree the failure and liquidation of these roads, the same as a merchant with an unduly inflated business would have to fail and liquidate. It is unquestionably true that production and commerce in this country is being taxed in the way of exorbitant rates for transportation to a far greater extent than the ordinary taxation for the support of government, and that while straining at the gnat of ordinary taxation we have swallowed the camel in the shape of taxation for transportation. This is illustrated by the revenues of the railroads of the State of New York, which exceed by more than twelve times that of the entire revenues of the State derived from taxation, and the New York Central Road alone has in ten years paid dividends upon the watered stock which was put into that road in the years 1867-'68; dividends upon the watered portion alone, which in ten years, with compound interest, amount to more than fifty-two millions of dollars. The Pacific railroads have during the last ten years also exacted from the public many millions of dollars over and above what would have been required to have paid liberal interest and dividends upon the actual cost of those roads. The report of the investigation into the management of the Credit Mobilier Construction Co., of the Union Pacific Road has shown that the directors of the Union Pacific Road presented themselves, as directors of the Credit Mobilier Construction Co., with \$94,650,287.24 in cash, stock, and bonds, of which they acknowledged \$43,929,328.24 were profits. It is believed by many that the \$27,236,000 received as the proceeds of bonds issued to them by the government would, if honestly expended, have been sufficient to construct the entire work; and yet the commerce of this country is being taxed, and probably will continue to be for all time, to pay dividends upon the entire mass of obligations thus issued. In view of such facts as these, any apportionment scheme which involves the charging of rates higher than would be necessary to pay a fair return upon capital necessary to honestly construct the roads of which the combination is composed, must prove detrimental to the interests not only of New York City but the whole country.

Question 16. Please to mention the particular branches of trade which have been to any considerable extent deflected from New York to other Atlantic seaports during the last five years, and state the opinion generally entertained among the leading merchants of New York as to the cause or causes which have led to such changes in the course of trade.

Answer. In export trade large quantities of business, principally grain, have been diverted from New York to Baltimore and Philadelphia during the winter season when the great natural advantages which New York enjoys are neutralized by canal navigation being closed, and it is at this time of the year that the distance allowance in favor of Baltimore and Philadelphia, together with their heretofore somewhat cheaper terminal charges on goods arriving by rail and destined for export, operate greatly to their advantage. That this distance allowance is unjust is proved by the opinion generally entertained by experts, that, owing to the volume of business done, it actually costs the railroads less to do New York business than it does either Philadelphia or Baltimore business, and this is virtually conceded by all the roads making uniform rates on import and export freight from and to foreign countries through all the ports. It is disproved also by giving to Boston equal and in some instances lower rates, notwithstanding her distance to principal Western cities is greater. The foregoing relates principally to export trade, but the discrimination against New York on her importing and distributing business is perhaps the most important and flagrant of the two. Goods

have been habitually carried on special contracts, to jobbing points in New York State and beyond, for a few favored wholesale merchants, at prices ranging from one-half to one-third those charged to the general public. This practice has had the effect to forcibly take from wholesale merchants on the seaboard and give it to wholesale merchants at interior jobbing points. This is notably true of the dry-goods trade, and all branches of trade have thus been more or less injured. But for the great advantages enjoyed by New York in having the Erie Canal a great part of the year to swell its export business, and its preponderance of capital, these effects would doubtless have been more serious than they have been.

Question 17. Have the railroads terminating at New York entered into any arrangement with ocean steamer lines designed to meet special advantages afforded at other Atlantic seaports?

Answer. It is generally understood that the railroads terminating at New York have agreed with the Baltimore and Philadelphia lines that rates from and to interior Western cities on export and import trade shall be uniform through all the ports, and that these roads accept their *pro rata* portion of the through rate. Rates from Liverpool to Chicago by way of Boston, at this time, April, 1878, are some two shillings per ton lower than through the other ports. This is probably attributable to the cutting of the railroad rate by the Grand Trunk Line.

Question 18. Are the steamer lines running out of New York to any extent purchasers of grain for the purpose of completing their cargoes to Europe; and, if so, what is the opinion entertained by the grain merchants of New York as to the effect of such purchases upon trade?

Answer. I am not aware and cannot ascertain that any of the regular steamer lines running out of New York are in the habit of purchasing grain for the purpose of completing their cargoes to Europe. Some time since this was done to some extent by the Anchor Line, but it gave such dissatisfaction to the merchants who were in the habit of shipping by this line that the practice was relinquished. It is manifest if such a practice were tolerated on the part of common carriers, that at times, when freight room was scarce and profits on shipments large, the temptation would be great for said carriers to monopolize the carrying capacity of their steamers and rule out the general public. The opinion entertained by merchants is that this practice is unfair to the commercial community and incompatible with the functions of a common carrier.

Question 19. What is the present number and capacity of grain elevators at New York, and where are those elevators located?

Answer. The number of stationary elevators at the port of New York is seventeen, with a storage capacity of 16,420,000 bushels; the number of floating elevators is thirty-four, with a transfer capacity per hour of 279,900 bushels. The location and other details in connection with these elevators, taken from the official list of the Produce Exchange, are herewith submitted.

Floating and stationary elevators at the port of New York.

STATIONARY.

Names of owners or managers.	Names of elevators.	Location.	Storage capacity, bushels.	Transfer capacity, per hour.
The Grain Warehousing Company, Atlantic Dock, Brooklyn, office 5 Moore street, New York, L. B. Shaw, president; R. H. Laimbeer, treasurer.	Stores Nos. 2 to 28 inclusive	Commercial Wharf, Atlantic Dock, Brooklyn.	6,000,000	25,000
	Stores Nos. 6 to 11 inclusive	Clinton Wharf, Atlantic Dock, Brooklyn.		
	Stores Nos. 70 to 92 inclusive	South Pier, Atlantic Dock, Brooklyn.		
	Columbia Stores	Foot Atlantic street, Brooklyn.	1,500,000	3,000
Hazeltine & Co., 31 Pearl street	Kelsey's Stores	Foot Irving street, Brooklyn.	1,000,000	3,000
Bartlett & Greene	Central	150 to 162 Furman street, Brooklyn.	500,000	5,000
J. P. & G. C. Robinson, office 14 Coenties Slip.	J. P. & G. C. Robinson's....	Erie Basin, Brooklyn..	2,800,000	3,000
New York Central and Hudson River Railroad Elevator, Whitney & Twombly, lessees, 43 Whitehall street	New York Central and Hudson River Railroad.	Foot Sixtieth street, North River, New York City.	1,500,000	60,000

REPORTS OF EXPERTS

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Floating and stationary elevators at the port of New York—Continued.

STATIONARY.

Names of owners or managers.	Names of elevators.	Location.	Storage capacity, bushels.	Transfer capacity per hour.
F. Woodruff & McLean, office 166 Water street.	F. Woodruff & McLean's ...	Foot Joralemon street, Brooklyn.	1,000,000	6,000
United States Warehouse Company, office 6 Front street, Ira Ketchum vice-president; F. S. Mathews, secretary.	United States Warehouse Company.	Foot Degraw street, Brooklyn.	500,000	8,000
Francis E. Pinto, 37 Pearl street.	Francis E. Pinto's	Atlantic Dock, Brooklyn.	800,000	4,000
Lawrence's Stores, foot First street, East River, office 3 Stone street.	Lawrence's Stores	Foot First street, New York City.	300,000	3,000
Tripp, Rogers & Co., foot West Thirty-fourth street.	Tripp's	Foot West Thirty-fourth street, New York City.	300,000	4,000
W. H. Payne, foot East One hundred and twenty-ninth street.	Payne's	Foot East one hundred and twenty-ninth street, New York City.	90,000	2,500
E. M. Van Tassel, Pier 39 North River.	Van Tassel's	Foot Vestry street, New York City.	40,000	3,000
E. M. Van Tassel & Co., Provost and Twelfth streets, Jersey City.	E. M. Van Tassel & Co.	Corner Provost and Twelfth streets, Jersey City.	50,000	1,000
Fellows & Beyer, foot Taylor street, Brooklyn, E. D.	Fellows & Byers's	Foot Taylor street, Brooklyn, E. D.	40,000	3,000

FLOATING.

Names of owners or managers.	Name of elevators.	Storage capacity, bushels.	Transfer capacity, per hour.
International Grain Elevating Association, office 31 Pearl street, New York, E. Annan, president.	Bolivia, Renovator, Egypt, each 5,000 bushels.	.....	15,000
	Continental, Eldridge, International, Manhattan, Metropolitan, Russia, R. H. Foss, and Scotia, each 4,000 bushels.	.....	32,000
	Malster, 3,500 bushels; Domestic, 1,800; Kings County and Croton, 1,500 bushels each.	.....	8,300
The New York Floating Elevator Company, George D. Puffer, president, office 47 Pearl street.	Albany, Havre, Hudson, Liverpool, Oswego, each 5,000 bushels.	.....	25,000
The Floating Elevator Company, E. G. Burgess, president, office 35 Pearl street.	New York (2 legs), 8,000 bushels; Transporter and London, 4,000 each.	.....	16,000
International Grain Elevating Association, office No. 1 Moore street, George E. Nichols, president.	Telegraph and Excelsior, each 3,000 bushels.	.....	6,000
The Corn Exchange Elevator Company, office 38 Pearl street, R. H. Vaughan, president.	.....	.....	3,000
Clark & Allen, foot East Twenty-eighth street.	H. F. Hebbard .....	.....	1,500
Haseltine & Co., 31 Pearl street	Baldwin and Columbia, each 4,000 bushels.	.....	8,000
Charles E. Huberer, foot Amity street, Brooklyn.	Enterprise .....	.....	3,500
David Jones, No. 619 Sixth street	Active .....	.....	2,000
W. D. Mangum's Son, office 92 Broad street; station Pier 6, North River.	Union and Hillyer, each 2,000 bushels.	.....	6,000
Marsh, White & Co., foot North Fifth street, Brooklyn, E. D.	Manhattan .....	.....	5,000
Total (17 stationary and 34 floating elevators)		16,420,000	279,800

Question 20. Within what area in this country is the grain trade of New York confined? This inquiry relates to the territory supplied with grain and flour from the New York market.

Answer. The domestic area supplied with flour and grain from the New York market is very limited, being confined to the environs of New York and a few points along our seacoast. Formerly almost the whole of New England was supplied from New York, but the distribution of flour and grain by rail during the past few years has attained large proportions, and now the whole interior, as well as most of the small seaports, are supplied by direct shipments from the West by rail. Of the enormous quantity of cereals and their products which find a market in New York by far the larger proportion are destined for export, but of course, with a population exceeding two millions within the circle of a few miles, the local consumption is also considerable. New York, however, depends principally upon her export trade, for which, owing to her being the principal seaport of the country, and having large numbers of steam and sail lines to all parts of the world, she enjoys superior facilities.

Question 21. Please to mention the advantages which, in your opinion, have resulted from the formation of the New York railroad apportionment scheme—

1st. In preventing discriminations as against the interests of interior points, like Buffalo, Pittsburgh, Cleveland, Detroit, Toledo, and Cincinnati, and in favor of the Atlantic sea ports, and generally discrimination against all that class of traffic commonly known as local or non-competitive.

2d. Advantages which may have resulted from the stability which has thus been secured in rates.

3d. Advantages from the elimination of the uncertainty in the minds of merchants generally as to the comparative rates charged them and other competitors.

Answer. The advantages which have resulted from the formation of the railroad apportionment are the abrogation, to some extent, of special contracts to wholesale merchants in Western cities, although there are indications that this rule has been broken in some instances.

There is, unquestionably, an advantage in the stability of rates, provided they be reasonable; but the high rates charged by the pooled lines in a great measure defeat this object. One serious break occurred owing to the competition of the Grand Trunk Road. Roundabout lines were able to divert considerable traffic, and various evasions have taken place, as there always will when excessive tariffs are sought to be enforced. [NOTE.—As one of the anomalies in railroad management I may here mention that east-bound rates, with a full traffic, are usually much less than west-bound rates (at the present time, May, 1878, nearly 100 per cent. less); and this notwithstanding about two-thirds of the cars are hauled back to the West empty. A usual law of business is that the smaller the volume of business the stronger is the competition to secure a share of it and the more slender are the profits; in this instance it is precisely the reverse.] Local or non-competitive rates have not been affected by the apportionment scheme, and here the great discrimination and abuse of special contracts remain in full operation. The advantages resulting from eliminating the uncertainties in the minds of merchants generally as to the comparative rates charged them and other competitors have not as yet been realized although with honest management these may, in time be secured.

Question 22. Please to present your views as to the injustice of the special contracts above mentioned by a description of those demoralizing practices in the course of the contests between the solicitors of freights in which the merchants have been led to practice deceptions upon the agents of the railroad companies, and in which the agents of the companies have been led to practice deceptions upon the merchants.

Answer. In an ethical view these special contracts are productive of uncertainty, distrust, dissatisfaction, and general demoralization. They are necessarily unfair, and therefore, to a great extent, secret and confidential. Merchants who would prefer to have a uniform rate, which would give them no advantages over their neighbors or their neighbors over them, are compelled, so long as this mode of business is tolerated, to avail themselves of these special advantages, or else they are soon distanced in the race by less scrupulous competitors. Irregularities in rates are a premium upon deception in classification, and this together with other evasions are more or less practiced both with and without the connivance of the agents of the companies.

Question 23. Please to explain in what manner and to what extent the practice of making special contracts to favored shippers is in any manner influenced or controlled by the New York apportionment scheme as to west-bound traffic, referring, in this connection, both to shipments east of Buffalo, Dunkirk, Pittsburgh, Wheeling, and Parkersburg, and to shipments west of these points.

Answer. The apportionment scheme has practically no effect upon special contracts made to points east of Buffalo, Dunkirk, Pittsburgh, Wheeling, and Parkersburg. As regards principal points west of these named it theoretically abolishes special contracts, and if conscientiously lived up to it would be a redeeming feature of the whole

plan; otherwise it is the most unequal and onerous form of class taxation of which we have any record.

Question 24. Please to describe the Belt Line, stating the rules and regulations governing its use by day and night.

Answer. The Belt Line of railroad in New York, more properly known as the Central Park, North and East River Railroad Company, is a horse railroad running along West and South streets, comprising the water front of the business part of the city; thence along various streets and avenues on the east side of the city to Fifty-ninth street, where it crosses the city, skirting the lower boundary of Central Park, to Tenth avenue, and down that avenue again until it again strikes the water front on the west side at West street. A portion of its route in West street above Canal has heretofore been occupied by the track of the Hudson River Railroad, leading to the freight depot at St. John's Park on the west side of the city, and this track has been jointly used by the Belt Road and the Hudson River Railroad under a working arrangement for that purpose. Recently, however, at the solicitation of the merchants, our municipal authorities have granted permission to use the track of the Belt Railroad for the movement of freight-cars during certain hours of the night, and has given power to lay switches to the various wharves and warehouses along its route. It is believed that this is an important step toward improving the terminal facilities of New York, and bringing the cars and ships together, as is done in the other principal seaboard cities. It will, to a considerable extent, remove the excuse which New York roads have urged with some force, that New York did not extend to them the same facilities which other seaboard cities extended to their roads; and it is to be hoped that it is only the forerunner of a more complete and comprehensive system of terminal facilities worthy of the principal seaport of a great nation.

Question 25. You are requested to add to the foregoing inquiries any statistical or other facts which you may deem of interest, either with respect to the commercial interests of New York or with reference to the movements of or the conditions affecting the internal commerce of the country.

Answer. In accordance with the request to add any facts with reference to the conditions affecting the internal commerce of the country, I desire to call attention to the facts set forth in one of the reports of the committee on railroad transportation of the American Cheap Transportation Association, from which I have made the following extracts. The array of defects in the management of our modern highways there set forth is quite remarkable, and the remedies proposed seem eminently conservative and just. Beginning with abuses in construction, it says:

"The reckless and unprincipled manner in which some railroads are built would astonish many persons, and we give the following as a sample: A charter is obtained and a few men get together without a dollar in ready money, form a company, issue construction bonds 'secured by mortgage upon the road,' and a committee of directors is sent to New York to 'place' the bonds. The committee enter into negotiations with some prominent banker to undertake the placing of the bonds, he to get what he can for them and allow the road 70 cents on the dollar, the road to pay the advertising bills. If the committee are honest the road ultimately gets 70 cents less the advertising bills, but many committees are not honest, and as soon as they have found a banker to undertake the job at 70 they communicate with the board of directors at home, stating that the best they can do is 60, and ask for authority to place the bonds at that figure. Having their confederates at home in this inside ring, the authority is easily obtained, and by arrangement with the banker he settles with the road at 60, and pays 10 per cent. over to this syndicate for their personal use and benefit. If there is a happy combination of circumstances, such as absence of financial disturbances, suspension of the banker, &c., and if they get all the counties, cities, and towns along their route to issue bonds liberally, the road may be finally built and furnished with rolling stock; then our worthy friends of the board of management divide the stock between themselves without equivalent, fix the rates for freight and passengers high enough to pay interest on the face value of the bonds and par value of the stock, and then, after voting themselves fat salaries, proceed to foist the stock off upon an unsuspecting public. As soon as the members of the ring manage to sell most of their stock they go to work and organize a 'Fast Freight Line,' or other Credit Mobilier institution, to which they give a contract which soon impoverishes the road and enriches them, so that when the road passes into bankruptcy they are enabled to buy it in, issue new stock, and repeat their little financial arrangement over again. In sketching the completion of this road we forgot to say that there was a 'construction' ring; this ring had their slice from every contract made, and not a mile was graded or tie laid, not a rail or engine or car purchased, not a depot erected or nail driven, but a percentage went into the pocket of the ring.

"As for the banker, by a free use of the press (who lend the weight of editorial columns to the project), he succeeds in 'placing' the bonds at 90, 95, or par, among the widows, orphans, and other unsophisticated persons of small means who have confidence in the banker and editor that recommend the conversion of government

bonds into the 'equally reliable and better paying railroad securities.' Everything goes on smoothly until some morning the railroad stops paying interest upon its bonds, passes into bankruptcy, sells for little or nothing, and that is the end of it, so far as the banker, the editor, and the person of small means are concerned. In the mean time the managers of the road find it necessary to buy the usual number of legislators, and retain all the best legal talent along the line of the road, in order 'to protect their rights from the encroachments of the people,' who have languished under extortionate freight charges, and who have been groping blindly about to find a way to remedy the evils which, notwithstanding that they labor early and late, and raise crops which are the admiration of the world, are making them poorer each year. Now, while we are far from desiring an indiscriminate war upon railways, we claim that public opinion must be awakened to these abuses, and that they must be eliminated from our present railway system. The people of this country are beginning to find that these defects in our transportation system are the 'Old Man of the Sea' upon the shoulders of the commerce of the country, and when they realize that the watered stocks and other swindles in this line are a greater burden than our entire national debt, we may be sure that they will in some way work out a remedy.

"The foregoing relates principally to the defects in the manner of construction, but they are none the less prominent in the operation and management of railways. Probably the greatest abuse in the present system of railway management is the practice commonly known as 'stock watering,' or the capitalization of surplus earnings, the most usual form of which is accomplished by charging high rates of freight and accumulating a large surplus fund, putting it into improvements and then issuing stock to represent the value of these improvements; or, in other words, exacting money from the public, and then forever after making the public pay interest on the money so exacted. It is argued by the apologists for these practices that it is current among manufacturing and other corporations, but they ignore these essential points: that a railroad is endowed with the right of eminent domain, the right to take private property *because it is for public use*, and railroads therefore owe some duties to the public which manufacturing companies do not. Again, manufacturing corporations are not like railroads, natural monopolies by the very nature of their construction, and no one is obliged to patronize them, as is the case with the railroads. We cannot better illustrate the practical operation of this abuse than by comparing the management of the 'Baltimore and Ohio' and the 'New York Central and Hudson River' railroads. Both of these are trunk lines, connecting the interior with the seaboard and operating nearly the same extent of road. The policy of the former company has been to invest its surplus earnings in the improvement of its road, and carrying forward their cost upon their books as a surplus, while that of the latter company has been to make the same investment of earnings, but to issue stock representing the same.

"This plan appears to have been initiated with the formation of the New York Central Railroad in 1853, by the consolidation of the ten separate corporations owning the route between the Hudson River and the Lakes. The combined amount of share capital and convertible bonds of these separate organizations was then \$23,235,000, but a considerable portion of the share capital had not been paid in. The equalizing process of the consolidation was that the Schenectady and Troy Company—that being the least productive of all—should come in at par, while the holders of stock or convertible bonds of the other roads received a premium in consolidated 6 per cent. debt certificates ranging from 17 to 55 per cent., making an issue of these certificates amounting to \$8,894,500, or over 30 per cent. on the true share capital of the company. From this time down to 1867 there had been no material change in the total of stock and debt of the New York Central Company other than what could be nearly accounted for by actual value received, and its capital account was then represented by \$28,537,000 of stock and \$12,069,820 of bonds, a total (including the 'water' of 1853) of \$40,606,820. The Hudson River Railroad Company at the same time had a share capital of \$7,000,000 and a bonded debt of \$7,227,000; total, \$14,227,000; making these two companies, which in 1860 were consolidated, stand in 1867 as follows: Stock, \$35,537,000, and bonds, \$19,296,820, or a total capital account of \$54,833,820.

"During 1867 the Hudson River Company presented its stockholders with \$3,500,000 stock, or a dividend of 50 per cent.; and again, at the time of consolidation, another one of 85 per cent. on the then outstanding stock of \$16,000,000, making an issue of \$13,625,000. The New York Central Company had, in 1868, presented its stockholders with \$23,036,000, or 80 per cent., followed by one of 27 per cent., \$7,775,000, at the time of consolidation. Thus in the space of two years the now New York Central and Hudson River Railroad Company added to its capital the sum of \$47,936,000, created out of nothing but the will of its directors and the mixture of paper and printers' ink. From 1870 to 1872 the bonded debt was increased each year by from one to two millions of dollars, since which it has been increased some \$20,000,000 for purposes of construction. Who shall say if any, or how much, of this has been additional 'water' to make up the necessary amount of \$7,200,000 for annual dividends? It will be seen by the

foregoing that the known fictitious capital of this company, including the issue of 1853, is some \$10,000,000 greater than the real capital which had been invested down to 1869.

"In the one case the liabilities represent about \$40,000 per mile of road, and in the other about \$130,000. Both pay about the same dividends, and it certainly requires no mathematical ability to comprehend the fact that, in order to do this, the latter road must on the same traffic charge the public a much higher rate of transportation. The roads mentioned have been selected only because they are conspicuous examples, and, to our shame be it said, that aside from the Baltimore and Ohio there is not another trunk line of railroad in the United States to hold up as an example of honest railroad management. The entire railroad system of the United States is tainted with the same practice, and it is estimated that about one-half of the stock of the entire body of railways in this country has been thus manufactured. There are other abuses connected with the management of railroads, such as fast-freight lines run by outside companies, the stock of which pays enormously, and is owned by their directors, superintendents, and other employés. These fast-freight lines now do much of the business of the country, and although within the past few years many of them have, in deference to public opinion, been changed from the non-co-operative to the co-operative system, yet those of the old style which remain are gradually sapping the life of the railroads over which they run. They should be driven out in every case, and their business should be done exclusively by the railroads themselves. The palace and sleeping-car and express companies are another excrescence upon the railroad system of the country; and from the fact that they now own from ten to twenty million dollars' worth of cars, bought mostly from profits, they should be bought out by the railroad companies, so that the profits would go to swell their general revenues. Many railroad managers, superintendents, and other officers, are interested in coal mines, saw-mills, farms, and manufacturing establishments, and give themselves lower rates when other people are paying higher rates for the same accommodation. These gentlemen and the master mechanics are frequently interested in patent boxes, patent lubricators, patent ventilators, patent brakes, and patent fastenings, and are thereby induced to use their own when they could get cheaper and better ones with advantage to the roads and their stockholders. Their road-masters are interested in patent frogs and crossings, patent joints, and patent track-tools. General freight agents are interested in equipment companies and fast freight lines, and make money by giving rebates, drawbacks, and special rates, or by furnishing cars to shippers who will pay a bonus and denying them to such who will not, or do not, know the ropes. Passenger agents share the spoils of the 'scalpers.' Purchasing agents exact and pocket commissions on all the supplies and materials purchased and used in the various departments. Paymasters have been known to levy a tax upon all orders accepted and paid by them.

"And, in addition to all this, lavish and extravagant expenditure by the managers has been the rule rather than the exception. The money paid by the public for transportation, instead of being carefully husbanded and applied to the payment of the proper dividends to stockholders, has been used to influence legislation, and much of the corruption among men in public life may be traced directly to this source. The history of the Credit Mobiler is yet fresh in our minds, and in the report of a committee appointed by the legislature of the State of New York, in 1872, to investigate the affairs of the Erie Railroad, we find the following: 'It is further in evidence that it has been the custom of the managers of the Erie Railway, from year to year in the past, to spend large sums to control elections and to influence legislation. In the year 1868 more than \$1,000,000 was disbursed from the treasury for 'extra and legal services.' For interesting items see Mr. Watson's testimony, pages 336 and 337.

"Mr. Gould, when last on the stand and examined in relation to various vouchers shown him, admitted the payment, during the three years prior to 1872, of large sums to Barber, Tweed, and others, and to influence legislation or elections; these amounts were charged in the 'India-rubber account.' The memory of this witness was very defective as to details, and he could only remember large transactions; but could distinctly recall that he had been in the habit of sending money into the numerous districts all over the State, either to control nominations or elections for senators and members of assembly. Considered that, as a rule, such investments paid better than to wait till the men got to Albany, and added the significant remark when asked a question, that it would be as impossible to specify the numerous instances, as it would to recall to mind the numerous freight cars sent over the Erie road from day to day. (See testimony, p. 556.)

"It is not reasonable to suppose that the Erie Railway has been alone in the corrupt use of money for the purposes named; but the sudden revolution in the direction of this company has laid bare a chapter in the secret history of railroad management such as has not been permitted before. It exposes the reckless and prodigal use of money, wrung from the people to purchase the election of the people's representatives, and to bribe them when in office. According to Mr. Gould, his operations extended into four dif-

ferent States. It was his custom to contribute money to influence both nominations and elections.'

"The foregoing will serve to indicate the defects and abuses of our present system of railway management, although those we have enumerated are by no means all of them. We may now, however, properly proceed to consider the remedies.

"This opens up a wide range of discussion, but we propose to confine ourselves to those remedies which experience has demonstrated to be practicable. State regulation of railways by making laws which fix rates is, as a whole, impracticable; the moment you attempt to regulate the details of railway management by specific enactments, that moment you fill the statute-books with a mass of laws which benefit only the members of the legal profession.

"There are, however, certain general laws which work well in practice, and which every State should enact for the regulation of railroads which are exclusively within its borders.

"Under this head we may enumerate the following:

"1. A law providing a board of railway commissioners, with powers similar to those possessed by the railway commissioners of Massachusetts.

"2. A law to prevent stock inflations similar to the one now in operation in Massachusetts.

"3. A law providing for the publication at every point of shipment of rates and fares, embracing all particulars regarding distance, classifications, and rates, which should be the same to all persons under similar conditions, and prohibiting the increase of such rates above the limit named in the publication without giving the public reasonable notice.

"4. A law prohibiting officers or directors of railways from either directly or indirectly owning or becoming interested in any non-co-operative fast-freight line or car company, or from being interested in any manner in the furnishing of supplies to any company with which they may have official connection.

"5. A law prohibiting railway companies from acquiring or holding more real estate than is necessary for the operation of their roads, and prohibiting railroad companies or officers of companies from engaging in mining or any business other than that of transportation.

"6. A law making it a penal offense for any public official to accept or use the free pass of any railway company, and prohibiting railway companies from granting such passes to any but regular employes of such railways.

"7. A law providing that all common carriers shall receipt for *quantity*, whether it be of grain or other commodities, and to deliver the same at its destination.

"8. A law prohibiting representatives of the people who belong to the legal profession from being retained on either side in cases where the public interest is involved.

"Of these all but the first should also be national laws, and in addition Congress should also provide a department or bureau of commerce, for the purpose of obtaining and preserving statistics relating to our internal commerce, to the end that intelligent conclusions may be arrived at in matters pertaining to this great interest. There is no one thing that strikes the student of the transportation problem so forcibly as the amazing carelessness and neglect that has left a commerce so great without the ordinary facilities for obtaining even a correct idea of its extent. The total of the exports and imports constituting the foreign commerce of the United States for the year 1873 were under five hundred millions of dollars, while it is estimated that the value of products transported on all the railways of the United States for the same period was upward of ten thousand millions. The commerce of the Ohio River was estimated at sixteen hundred millions ten years ago, and at this rate the entire domestic commerce of the country would at this time probably not be less than fifteen thousand millions of dollars."

That such an enormous commerce as this is worth attention, and that the abuses enumerated require regulation in the interest of the public, no one can deny. That the various States possess the power to regulate the roads exclusively within their respective borders, and that Congress also has the power over inter-State corporations, is generally conceded. These powers were specifically defined by the United States Senate Committee on Transportation Routes as follows:

"First. That the powers of Congress whatever they may be, are derived directly from the people of the several States, and not from the States themselves.

"Second. That every important word in the clauses which confer the 'power to regulate commerce among the several States,' and to 'make all laws which shall be necessary for carrying it into execution,' has received legislative, executive, and judicial construction, and under such construction the power of Congress to regulate inter-State transportation by railroads, and to aid and facilitate commerce, is clearly established.

"Third. That in the exercise of this power Congress is authorized, under the grant of auxiliary power, to employ such means as are appropriate and plainly adapted to their execution.

"Fourth. That in the selection of means by which inter-State commerce shall be regulated, Congress may—

"1. Prescribe the rules by which the instruments, vehicles, and agents engaged in transporting commodities from one State into or through another shall be governed, whether such transportation is by land or water.

"2. That it may appropriate money for the construction of railways or canals, when the same shall be necessary for the regulation of commerce.

"3. That it may incorporate a company with authority to construct them.

"4. That it may exercise the right of eminent domain within a State in order to provide for the construction of such railways and canals; or,

"5. It may, in the exercise of the right of eminent domain, take for the public use, paying just compensation therefor, any existing railway or canal owned by private persons or corporations."

And these opinions have since been substantially confirmed by the decisions of the United States Supreme Court in the "granger cases." In view of these broad principles of equity, so authoritatively defined, it is, perhaps, not too much to hope for a gradual elimination of the abuses in our transportation system which have so long been a burden upon the industries of the people.

Statement prepared by Mr. Thurber, in reply to an inquiry touching the influence of capital upon the course of trade, and the relative power of capital and of the economies of transportation upon prices and upon the course of trade.

SIR: In answer to your supplementary question in regard to "the influence of capital upon the course of trade," and in which you request an expression of my views upon "the persistent power of the capital of New York City toward maintaining her commercial supremacy," I would say that it is manifestly impossible to condense within a few pages a satisfactory answer to a question which opens up more or less directly a wide range of politico-economic questions, but I may summarize them as follows: First, while capital undoubtedly does exercise a considerable influence as hereinafter shown, it is entirely subordinate and secondary to other essential conditions. Great commercial cities are dependent upon geographical position, upon climate, upon harbors, upon accessibility to the sources of supply of the products which make commerce, and in later years, perhaps more than all, are dependent upon transportation facilities which are most potent in attracting or repelling commerce. Of course capital has much to do with providing transportation facilities; and capital controlling the power of steam has done much to change the channels of trade which half or even a quarter of a century since were thought to be fixed and immovable. It is in this direction, perhaps, that the power of capital in controlling trade is most noticeable. English capital invested in steamships has reached out to the four quarters of the globe, attracting the commerce of the world to English markets. In this country the capital of the seaboard States, and to a considerable extent that of Europe, invested in railroads, has carried the productions and supplies of the great West over mountains and rivers along our parallels of latitude, when it would seem by all the natural laws of trade they would have sought the seaboard by means of the great rivers which penetrate the country longitudinally; and capital embodied in the labor-saving, wealth-creating, wonderful steam-engine has revolutionized the entire commercial, political, and social organization of the world. But this power has become so widely diffused, and is so generally used by all the great commercial cities, that it may be said the greater capital which New York controls does not, in the way of transportation facilities, give her any advantage. Indeed, as regards railroads, she may be said to be at a disadvantage, for her railroads are controlled by persons who selfishly (and I believe shortsightedly) operate them without regard to the commercial interests of New York, and thus abrogate, to a considerable extent, the advantage which New York has long enjoyed of having during seven months of the year water transportation which has, probably more than anything else, contributed to her commercial supremacy. There can probably be no more striking example of the power of capital invested in transportation than what has been accomplished by the few millions which the people of the State of New York wisely invested in the Erie Canal. But I have perhaps said enough upon the power of capital invested in transportation facilities controlling trade, and will now proceed to consider how far the influence of capital controls trade at certain centers and upon certain lines by *capitalizing commodities in movement*. In your communication you say: "I have seen it stated that the capacity of capitalizing commodities in movement by drawing against a fixed time in transit and delivery, upon the basis of the value of the commodity, exercises a stronger influence over prices and over the course of trade than does the economy of transportation." So far as the influence over prices is concerned, this may be correct. If there be not sufficient capital to move the commodities produced, they naturally decline in value, or, in other words, more would have to be given for a dollar than if the supply of capital was in larger proportion to the supply

of commodities to be moved. This truth is doubtless at the root of the popular demand in many parts of the country for more currency, but when we consider how infinitesimal is the proportion of the exchanges effected by the gold, silver, and paper currency of the country as compared with checks and bills of exchange, the importance of this issue sinks out of sight, and I cannot but conclude that it has assumed undue importance among the public questions of the day. How large the exchanges effected by other mediums than the paper and metallic money of the country it is impossible to say or even to estimate, but we may catch a glimpse of its immensity in the transactions of the New York Clearing House (which, as is well known, is a contrivance to simplify the dealings of New York banks with each other), and which were during the year of 1877 \$24,663,240,003, nearly all of which was in the form of checks and drafts, and it is not perhaps too much to say that all the currency in the United States could not have effected these exchanges which were so quietly and easily done by these bits of paper. The idea has gained a wide circulation that bank capital is employed in grinding the face of the poor and cheating the producer out of the proceeds of his labor, but I think a careful examination will show that the efforts of railroads to earn interest and dividends upon their watered securities by charging exorbitant rates of freight is a greater burden upon all classes of citizens than the interest paid by borrowers upon the capital borrowed. In the latter case, at least, the borrower pays only upon what he receives, and he has the option of whether he will borrow or not; in the former, the public are obliged to use the accommodation furnished by the railroads and to pay the amount demanded for the service.

I cannot better illustrate the services performed by bank capital than by quoting the words of Professor Sumner, who says that "banking capital renders very important services in that it throws the burden of waiting between producer and consumer on the idle capital of the country and releases the capital engaged in production so that it can be at once re-employed. Modern commerce cannot be carried on without banking facilities; they are part of the modern system. The economy is obvious and enormous, banking capital making commerce move many times more rapidly than it could without banks."

I might pursue this branch of the subject into *commercial credits*, which still further increase the facilities of exchange. They are of course founded on capital, but depend largely on other considerations, and can be amplified many times beyond the amount of the capital upon which the credits are based; but to return to the proposition "that the capacity to capitalize commodities in movement exercises a stronger influence over the course of trade than does the economy of transportation," I must say that I do not think it is borne out by the facts. The reasons for this are given so concisely and forcibly in a paper by Mr. A. E. Orr, a merchant of this city, that I quote them as an expression of my own views, as follows:

"The proposition that the persistent power of the capital of the city of New York will maintain her commercial supremacy is, in my opinion, a fallacy, and one which if persisted in as being the major element in maintaining supremacy will in time surely rob New York of her legitimate commercial birthright, because in holding this delusion closely in view she will continue blind to those influences which in the past few years have been so busy and of late so terribly energetic in competing with her for a large part of her foreign and domestic commerce.

"It is said the ostrich when closely pursued by its pursuers will bury its head in the sand, and in this position imagine itself safe from harm. New York is not altogether free from the responsibility of having practised the foolish confidence of the ostrich. While Canada has been actively enlarging the Welland Canal, Boston boring through the Hoosac Mountains, Philadelphia and Baltimore opening up new paths to the granaries of the great West, whilst even sleepy New Orleans has been deepening the delta of the Mississippi and awakening to the importance of attracting to herself the commerce of those States bordering on her great river and its tributaries, New York has done little else to retain her commercial acquisitions than study the records of the past, and when cautioned against the aggressive action of her seaboard sisters, point to her bank balances and laugh at their attacks.

"I do not wish you to suppose that I fail to appreciate the importance of capital in relation to the course of trade. It is a very necessary auxiliary, and in a country where comparative poverty is the rule and means of transit limited and defective its sway may be all important to control and dictate. But in a country like the United States, where wealth is diffusive, where mercantile productions are almost limitless, where means of transportation are superior to those of any country in the world and constantly increasing, and whose surplus productions are sought at her own seaboard by almost every civilized market, capital is not the controlling element that will localize commerce, but on the contrary the place that will present the most remunerative trading will be sought by capital.

"New York was not always the financial center of the United States. In the early days of American commerce, when she could only count her wealth by thousands, other cities could point to theirs in tens of thousands. It was not until a producing

country became her tributary through the means of cheap transit facilities that New York began to assert her financial and commercial ascendancy. Then it was that the surplus of our home products sought her in trade, because they could be placed here cheaper than at any other market on the coast, and then it was that the products of the foreign looms were landed at her wharves, because they could be marketed in the interior to better advantage than by the more expensive routes offered by other seaboard cities, and because (and this is a very important item in the calculation) the vessel which brought the foreign luxuries or necessities was assured of a return cargo of home-grown surplus production by coming to her port. If the Erie Canal had terminated at Boston instead of at New York, which city to-day would have been the recognized commercial metropolis of the United States? If capital can maintain commercial supremacy, from whence did New York obtain her commerce and her capital? I do not know, but if the query is put in the negative the answer is very plain. She first secured transit facilities with the interior superior to those of any competing point, then the surplus production of the country sought her as a market, and then the trade that she had to offer the capitalist attracted to her his capital.

"Let me give you a practical illustration of this law of trade which came to my notice only a few days ago. Two hundred thousand bushels of corn in Chicago was seeking a market at the seaboard. The question controlling its destination was not the financial strength of the city to be selected, but which market on the Atlantic coast would yield the largest return to the shipper. An application came to a firm in New York in these words 'Will you advance on two hundred thousand bushels of corn to be shipped to Baltimore?' They answered, 'Yes; but why to Baltimore in preference to New York?' The reply came, 'Transportation to Baltimore is half cent per bushel less than to New York.' And so the corn went to Baltimore; and just so much was added to her commercial strength by New York capital. This corn was not controlled by capital, it could select its own market, and having selected Baltimore, because the sum of one thousand dollars could be saved in transportation charges, New York capital followed it there for the reason that it was idle and Baltimore offered it employment.

"Follow this transaction a little further. Six vessels will find in Baltimore six cargoes of corn awaiting them; and she will receive the inward cargoes of those six vessels because she can supply them with return freights. Now what think you? Was it Baltimore's cheaper transportation charges, as against competing points, or New York's idle capital that procured for the former all the advantages arising out of this corn shipment?

"Having shown that capital is impotent to attract trade when opposed by the magnet of cheaper transportation, let me first point out as nearly as possible the measure of loss which New York sustained in this single transaction, and then suggest the remedy.

"If the corn in question had come to New York at the same rate of transportation as charged to Baltimore, six and a half cents per bushel (including the terminal charges in New York), or thirteen thousand dollars would have been the actual amount contributed for transportation within the borders of our State. Of this amount the State of New York would have received for tolls \$2,000, and the industrial portion of the population \$11,000. These figures only represent the measure of the positive known loss. The loss arising from the non-arrival of the six vessels at our port with their incoming cargoes, the handling and storing of these cargoes, and their final sale and transportation in great measure into the interior can only be matter of conjecture, but must also be taken into the estimate of the total loss sustained. Nor is this all. Baltimore having demonstrated the fact that she can give return cargoes to these six vessels, will induce a return on their part to her port with six additional companions, to the continued detriment of the foreign commerce of New York.

"It has been shown that one-half cent per bushel or the sum of \$1,000 turned this corn from New York to Baltimore. It is also shown that the tax that would have been claimed by the State of New York, if this corn had passed through her canals, was \$2,000. It is therefore evident that it was the toll charge made by the State that turned the corn from New York to Baltimore, and that through that demand, not only did the State fail to receive any toll whatever, but the industrial classes of the State failed to receive the sum of \$11,000, which otherwise would have come into their possession.

"In 1870 the toll charge of the State was reduced to three cents per bushel; in 1875 it was reduced to two cents per bushel; in 1877 to one cent. Why? Because western productions were seeking other routes to the seaboard which were cheaper than by the Erie Canal. This toll charge stimulated the construction of these routes just as unhealthy protection, by means of large tariff duties, stimulates over production of home manufactures. If a liberal policy had been extended to the city and State by making the canals free, these competitive routes would never have been constructed; and New York to-day would undoubtedly be, as she yet claims to be, the commercial metropolis of the United States?

"Why not then make the canals free and try thereby to retrieve what has been lost by the short-sighted policy of past legislation. Is this too much to ask for a city which, with its dormitories (Brooklyn and Westchester County), contributes more than half of the taxes collected for the support of the State?"

"I will not tax your time with discussing this subject."

"There is a great moral involved, and it behooves the city of New York to study it carefully. Commerce cannot be localized by capital; that is certain. But that place in the United States that can localize commerce through the advantages of position and transit facilities, both foreign and domestic, will attract and retain capital."

There is, however, another phase of the question, which has not been touched upon by Mr. Orr, and that is, the advantage which large capital gives New York in her importing and distributing trade; and this is precisely the advantage which an old established firm with abundant capital possesses over a younger house with insufficient capital. The former usually offers its customers a better variety, especially in goods of fine quality, requiring large capital to carry them, and it is also able to give more liberal terms and thus induce a larger patronage. The larger the volume of business the more cheaply it can be done, and it gains a certain "good will" after a time which continuously attracts and increases the volume of business. There is no question but that New York does enjoy substantial advantages over all competitors in this respect, and especially over the larger distributing cities of the interior. New York has not only the advantage of her own capital, but also, to a considerable extent, of the capital of foreign manufacturers who establish their branch houses or agencies in New York as the leading commercial emporium of the United States. Here these manufactured goods await purchasers; here new and attractive goods are first shown and the largest variety is to be found. Capital is also cheaper in New York than in western distributing cities, and the difference in the rate of interest perhaps fairly illustrates the relative advantages of different places as distributing points. Therefore I think it may safely be said that the capital of New York, in so far as its importing and distributing trade is concerned, does confer substantial advantages, and exercises "a persistent power toward maintaining her commercial supremacy." But for the fact that the railroads have persistently, and most unjustly, discriminated against the retail merchants of the interior in favor of wholesale merchants of the interior by giving the latter special rates of freight out of all proportion to the difference in the cost of transporting a large and a small quantity, much of the wholesale trade which is now done in the interior would be done at the seaboard, which is undoubtedly the natural distributing point. In short, as stated in my answers to questions bearing more particularly upon the transportation problem, the policy pursued by the railroads previous to the adoption of the present pooling system was a direct subsidy to the interior wholesale merchant, and had the effect to forcibly take business away from the seaboard distributing merchants, and give it to those in the interior, at the same time infringing upon the retail merchant's right, as a citizen, of choosing in what markets he will buy his goods.

This has undoubtedly, to a considerable extent, neutralized the advantages enjoyed by New York, and if long continued must inevitably have proved that the advantages of capital are subordinate to other conditions, chief among which are transportation facilities. It is to be hoped, however, that this system, so unjust both to the retail merchants in the interior and the wholesale merchants on the seaboard, is a thing of the past; and that the future will develop a permanent system in the management of our transportation lines alike equitable to all classes.

APPENDIX No. 2.

INFORMATION FURNISHED BY SIMON STERNE, ESQ., OF NEW YORK, IN REGARD TO THE APPLICATION OF THE LAW OF CORPORATIONS TO POOLING ARRANGEMENTS AND TO DISCRIMINATIONS IN RAIL RATES, WITH SPECIAL REFERENCE TO THE POOLING ARRANGEMENTS AND DISCRIMINATIONS WHICH AFFECT THE COMMERCIAL INTERESTS OF NEW YORK CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 27, 1879.

Question 1. Please to state generally in what manner the trunk lines connecting New York City with the West have within the last year *unjustly discriminated* against that city in the matter of freight rates, and state whether, in your opinion, these discriminations have been of such a nature as to render them the subject of legal remedies.

Answer. I believe that great injustice has been done to the city of New York by the compact known as the pooling arrangement, entered into between the trunk lines, i. e., the New York Central, Baltimore and Ohio, Erie, and the Pennsylvania Railroads, the details of which are doubtless before you, in answer to inquiries addressed to others, and which I, therefore, do not set forth. The practical result of this arrangement places New York upon a seeming equality with its neighboring cities, Philadelphia and Baltimore, by the handicapping of New York with an arbitrary additional railroad freight charge, claimed to be the exact equivalent of the naturally lower ocean freight charges from Liverpool to New York, as compared with such neighboring cities. This additional charge amounts to an average of from 2 to 6 cents a hundred on all classes of freight. The justification put forth by the New York lines for this additional charge is the greater mileage from New York to the western distributing cities as compared with the distance from Philadelphia or Baltimore. This rate leaves out of sight the better gradient, as compared with all its southern rivals, of the New York Central Railway, and the bulk and value of the business which the city of New York gives to its main railway as compared with what its rivals receive from New York's neighboring cities. The burden imposed upon New York's citizens by this railway combination quite wipes out New York's great advantages heretofore derived from its magnificent harbor. The injustice done to a New York merchant by this arbitrary equalization can best be illustrated by an example. Let us suppose that five years ago a young man had placed into his hands \$100,000 to invest in business. Knowing the commercial supremacy of New York City he believes it to be of a permanent character for the reasons, 1st. That New York City has a harbor far superior to that of any other city on the Atlantic seaboard. 2d. That its main line of railway, the New York Central, has no mountains to cross, and therefore its superior gradient more than makes up in the estimate of competent engineers for its greater distance from Chicago, as compared with the Pennsylvania and Baltimore and Ohio Railroads. Railway experts, from Mr. Fink down, have told him that volume of traffic is the main element upon which the cost of the carriage per hundred per mile depends, and that the cheapness or expensiveness of such carriage to the terminal point is mainly determined by reducing the general proportion that the so-called fixed expenses of a railway bear to the operating expenses of trains. In all these elements of cost of freight he discovers that New York City has enormous advantages over its rivals. Moreover, he finds that New York sends back more full cars to the West than any other city, and has therefore an additional reason for reduced charges eastward; also, that it sends forward a larger proportion of "first-class," the most profitable freight. He therefore determined to invest his hundred thousand dollars in business in New York City. As these, what he believes to be permanent advantages for business purposes on the part of the city of New York, have determined the value of its real estate, this would-be merchant is compelled to invest in the purchase of a piece of property for business purposes at a much higher rate than he would pay for a like piece of property in Philadelphia or Baltimore. He pays, we will say, \$40,000 for a warehouse wherein to do his business, or he takes a lease representing in rental a capital of \$40,000. Half that sum invested in the purchase, or half the interest of that sum, would lease a like piece of property in Philadelphia or Baltimore. He invests his money, however, in New York, upon the theory that the permanent advantages referred to are not wholly capitalized in the excess of the cost of the property in New York as compared with Philadelphia and Baltimore,

and that for that reason the nominally dearer is still the cheaper property. But he pays in the increased price as compared with lands in Philadelphia and Baltimore to some degree an equivalent for the supposed permanent advantages of New York over neighboring cities. A combination of railway companies is thereafter made, by which the New York railways deliberately overcome, by the imposition of an additional freight charge, by agreement with the railways to other ports, the natural advantage which entered into the payment of the purchase of this property, which freight charge is sufficiently great to level New York down to an equality with her neighboring cities. By this combination New York's superior advantages are destroyed, and all that part of the value of the investment of our young merchant, as to every single dollar he paid more than he could have obtained a like piece of property for in Philadelphia or Baltimore, is annihilated, and he is placed at a permanent disadvantage compared with competitors in those cities, who, with a smaller investment of capital, are enabled to do the same business.

If the New York merchant has borrowed the money with which to purchase the property, this destruction of value may ruin him; hence a pooling which places New York upon an equality with her sister seaboard cities is an unjust discrimination against New York's natural advantages, and operates oppressively upon all the merchants who do business in the city of New York, because their investments in real estate or leases are all based upon a valuation arising from such natural advantages. To illustrate still farther the injustice of this, let us suppose a case resulting in a like equalization, made as against a railway company by artificial means to neutralize its natural advantages. The New York Central Railway has just such great natural advantages of a better gradient over the Erie Railroad, hence quite independent of its enormous local traffic, it can permanently charge a less sum of money for carriage of freight, and yet get the same interest on cost; this permanent advantage, among a number of others, is represented in an increased value of the stock of the line of the New York Central Railroad as compared with the Erie's stock. All of Mr. Vanderbilt's money investments in New York Central stock were, it is fair to assume, based upon a careful consideration of the increased permanent value of his line arising from the advantage of the absence of the Alleghany Mountains across his path. If the legislature of the State of New York were, for the purpose of counteracting this natural advantage and with the view to place the New York Central upon a level with the Erie Railway, to enact that the New York Central Railway shall build a series of curves between Albany and Buffalo, which shall in their effect artificially produce an equivalent of a gradient of 16½ feet per mile (that of the Erie), instead of less than 6 feet gradient of the Central, it is quite clear that at one blow the whole of the value of Mr. Vanderbilt's investment in dollars and cents, in so far as such investment represents the natural advantages of gradient, is completely wiped out. This is precisely what has been done by the New York Central and Erie Railways as to the real property of New York City by the compact called the pooling arrangement. The commerce of New York is deprived of the natural and permanent advantages to which it is entitled by its harbor, the absence of mountains in Central New York, the volume of its traffic, and the density of the population of the State. What is a seeming equalization is in point of fact a leveling down of the city having such natural advantages to the condition of its less favored rivals. It is handicapping the best horse, and New York by the pooling arrangement has been thus handicapped. A New Yorker may justly feel aggrieved at such a process, even if there were such a difference in rates of ocean freights as this pooling freight table presupposes.

• According to a certificate furnished me by Messrs. Galbraith Pembroke, H. Clarkson, Angier Bros. and D. M. McHarris, the leading London ship-brokers, in August last, it appears that owners of steamers carrying full cargoes of grain from the United States to Europe give the *preference at the same rate of freight* to Baltimore and Philadelphia as against New York; and by a certificate from the same ship-brokers, it appears that sailing vessels carrying grain from the United States to Europe give charterers the option to send the vessels through to New York, Philadelphia, or Baltimore, on the *same terms*. A careful inquiry made by me at Lloyd's last summer proved that as to insurances the rates were absolutely the same whether the vessels started from either of the North Atlantic ports north of Norfolk to Montreal.

Hence an additional freight charge, based upon a supposed difference of ocean freight charges, is subjecting New York to a discriminating rate which in time must prove destructive to her commerce, as she gets no benefit from her larger business; no benefit from the absence of mountains in the State, nor from the large local traffic which she gives to her railway; and were it not that the Erie Canal preserves to a degree New York's supremacy her condition would be critical indeed. New York's natural advantages have been capitalized to a very large degree and are in the coffers of private individuals, and the additional charge is an additional burden imposed upon its citizens so as to lure other railways into a combination which will prevent railway wars. There are adequate remedies in the law, if the courts have independence enough to apply them, as against the overpowering and overshadowing influences of these great corporations. Any stockholder has lawful ground for objecting that the corporation in which

he has invested his money, and over the conduct of which he has some control, subjects him by a copartnership arrangement to the changes of fortune of other corporations in which he has no investment and over which he has no control, and the attorney-general has a right, and, when information is lodged, it is his duty, to insist upon a judicial decree declarative of the principle that all such copartnerships without special legislative sanction are *ultra vires*; more emphatically is this true and do such arrangements come under the prohibition of the common law when, in their effect, they amount to conspiracies against the welfare of the community which chartered the corporations.

There are three branches of the law which are applicable to these cases. The first is the one which relates to conspiracies; the second that which relates to contracts made by corporations beyond their corporate powers; and the third one is that which vitiates contracts which are made against public policy by tending to create monopolies.

I. The common-law doctrine in relation to conspiracies found expression in a statute in the State of New York making it a misdemeanor (Sec. 8), "If two or more persons shall conspire" * * * 6th. "To commit any act injurious to the public health, to public morals, or to trade or commerce, or for the perversion or obstruction of justice or the due administration of the laws." (Sec. 8, title 6, chapter 1, part 4, Revised Statutes, vol. 3, page 970.)

In the case of *People against Fisher* (14 Wendell, 9), decided by Chief Justice Savage, it was held that a combination of shoemakers to raise their wages came under the act as being injurious to trade; that competition was the life of trade; and that while each individual shoemaker had the right to refuse to do work at less than a certain amount, his combining with other shoemakers that they shall refuse to do so was a combination subjecting them to the pains and penalties of a misdemeanor defined by foregoing statute.

The authority of this decision on the point at issue therein has practically been done away with by amendment of the Revised Statutes of 1870, which allowed labor unions to be organized notwithstanding the sections already cited; but in all other respects the interpretation of the law given by Chief Justice Savage still stands, and it is scarcely conceivable that our courts would say that what was unlawful for journeymen shoemakers to do by combination to wit, raise the price of the service of making shoes, is lawful for great corporations to do in open defiance of the statute, by combinations to raise the price of the transportation of commodities.

The ground of the decision in *People vs. Fisher* was that, although the object of the conspiracy was to benefit the conspirators, if their individual benefit is to work a public injury, a conspiracy for such an object is against the spirit of the common law, and the injury to the trade need not necessarily be an injury to the whole trade of the State; but if it is an injury to any particular part thereof, that is enough. In the case cited the injury was simply to the purchasers of shoes in the town of Geneva, and although, as Chief Justice Savage says, Auburn still may, notwithstanding the combination, make and sell cheaper shoes, yet, as such combination was injurious to the trade of Geneva, such combination is an offense subjecting the conspirators to indictment there. All the Eastern States, in so far as their agricultural interests are concerned, are subjected to a discrimination of a most destructive character. East-bound fourth-class freight (cereals and flour) is carried at as low a rate from beyond the State as from an interior agricultural point in the State to the seaboard. What chance has a farmer in Oneida County, whose land cost him \$120 an acre, against the Kansas farmer, whose land cost him \$2.50 an acre, in competing at the mart? However much this condition of affairs may be due to causes over which the railroads have no control, the fact that the railroads themselves are powerless to control this effect makes it the more the duty of the States which have given to the trunk lines their charters to prevent the depopulation of the Middle States and the destruction of values therein artificially to stimulate the settlement of our Western prairies.

II. There is abundant authority that corporations are confined within the four corners of their charters, and that they cannot enter into agreements in the way of copartnerships with other corporations at all. This is such well-settled law that it is scarcely necessary to cite authorities, but the language of Brice in his work on *Ultra Vires* is so to the point that its quotation will set cavil at rest.

"Agreements for apportioning between different companies the tolls receivable by the whole of them collectively may be valid; whether such agreements would, apart from statutory enactment, be considered good is doubtful. The contracts between companies which create in fact if not in name copartnerships, are void on the double ground of being *ultra vires*, and also contrary to public policy. And any arrangement for the division of tolls must, it is presumed, be objectionable upon the same grounds." Green's *Brice's Ultra Vires*, page 326.)

III. The spirit of the English law is one continuous protest against monopoly. The granting of exclusive privileges had been carried to an enormous height during the reign of Queen Elizabeth and the beginning of the reign of James I, but a remedy was applied by statute 21 of James I, chapter 3, which declared such monopolies, except as to patents, to be contrary to law and void. Since that time the doctrine of the com-

mon law has been that all businesses affected with a public interest is under judicial control as to the reasonableness of the charges therein made, so as to prevent a monopoly price. The businesses which are affected by a public interest seem, after a careful analysis, to be all such wherein the service is rendered at a particular locality, wherein combination is easy, and wherein by one way or another the right to carry on the business has been directly or indirectly conferred by statute. If, in addition to these earmarks of a business affected with a public interest, such business exercises the sovereign right of eminent domain, as railway companies do, there is no question left but that it is a business affected by a public interest, using as it does the most sovereign and absolute right of the public as preliminary to carrying it on. In such a case the doctrine laid down by Lord Ellenborough in *Allnut against Inglis*, in the Court of King's Bench, emphatically applies: "The question on this record is whether the London Dock Company have a right to insist upon receiving wines into their warehouses for a hire and reward arbitrarily and at their will and pleasure, or whether they were bound to receive them there for a reasonable reward only. There is no doubt that the general principle is favored, both in law and justice, that every man may fix what price he pleases upon his own property or the use of it, but if for a particular purpose the public have a right to resort to his premises and make use of them and he have a monopoly in them for that purpose, if he will take the benefit of that monopoly, he must, as an equivalent, perform the duty attached to it on reasonable terms."

Question 2. In your opinion, upon what general or special conditions should the question as to whether discriminations in rates are just or unjust be determined?

Answer. In answer to your second question, I would respectfully submit that whether or not a specified or particular railway rate is or is not a just one is determinable precisely as any question in relation to the propriety of any charge for the rendering of other services is solved. Railway rates embrace a larger number of factors than probably enter into the charge for any other services; all these factors, however, are ascertainable, and thus just rates can be arrived at by taking them all into account. Railway experts themselves are daily called upon by railway officers to determine these questions, and they do determine them with more or less accuracy. Into the question of rates many elements enter, such as mileage, bulk of traffic, gradient, cost of permanent work, proximity or remoteness of fuel, traffic expenses, as compared with value, whether it is necessary to haul many empty cars; in other words, whether the traffic is mainly one way or not, facility of handling commodities, terminal facilities, certainty of traffic, and many other elements, all these enter into the consideration of the justice of a freight or passenger charge. What relative weight in making rates shall be given to each one of them can only be determined in each given case. A line of a thousand miles in length should not give to mileage the same importance that a road must give to it which has a length of but ten miles, and thus the value of each item which enters into the charge must vary according to the actual circumstances of the case; but it is in each case an ascertainable quantity, and there is no more difficulty on the part of the public or a judicial tribunal to become possessed of the knowledge whether a rate is just or unjust than for the railway companies themselves to arrive at such information. There is neither mystery nor unfathomable abstruseness in these questions, and whatever can come within the intellectual horizon of the average railway official is quite certainly ascertainable by any trained expert engineer and accountant representing the public upon railway matters. However, as the elements which enter into a freight charge are so numerous, and as the relative weight which is to be given to each element or to all of them, varies with competition and the general currents of trade, no hard and fast rule can be laid down by which, in advance, a railway charge can be determined to be just or unjust. Hence, all making of legislative railway tariffs by statute have proved failures and must continue to prove failures. Under the statute known as the Cardwell act of 1854, which requires the English railways to treat all their forwarders upon the same basis under like circumstances, the English railway commissioners have adopted the rule that where a rate either by special contract or otherwise has been determined upon by the railway, any charge in excess of that rate is unreasonable, and the excess paid could be recovered from the carrier in an ordinary court of law. This does away with special contracts, as the fine imposed for making it is a general reduction of tariff down to the level of the lowest special contract. Railway companies are permitted to rebut a presumption which arises from a special contract and show that there are special circumstances in the nature of things, which entitle the holder of the special contract to exemption from being treated upon the general rule; but this must be something else than mere favoritism. The difficulty of adopting any fixed rule or test as to reasonableness of rates to a service into which so many elements enter, as in the case of a railway charge, is a very strong reason why, if the railway company fixes by a special contract a minimum rate, it should be estopped from denying what it by its own act declares to be reasonable. It does not follow, however, that because all legislative tariffs or "granger legislation" must from the nature of circumstances fail of achieving permanent good, that the railway companies shall therefore be the sole judges to determine what is reasonable and what is not, as all the tariffs of their

own making are as unstable as those which are made by government, and they must continually revise them to suit the exigencies of changing circumstances. Some tribunal, with means and power equally good with those of railway companies, to ascertain the facts, and not acting under the pressure of personal interest, should, therefore, represent the public and sit with the companies to see to it that this power of revision is not unjustly nor arbitrarily exercised.

Question 3. What legal remedies should, in your opinion, be provided against such unjust discriminations as you have above mentioned?

Answer. In answer to your third question, I believe that the power to restrain unjust discriminations rests with the legislature of each State. It should see to it that the corporations that it has created shall subserve the interest of the State to which they owe their existence. More especially is this duty imposed in the case of the railway corporations, because the charges they make are in the nature of taxes upon a community. The great trunk-lines, as illustrated in my answer to the first question, have the power to increase, jeopard, or destroy the prosperity of great communities. The special remedies that I would suggest would be, first, the institution of a committee of inquiry of first-class men appointed by the general government, to ascertain what had been done in other countries to solve and deal with the railway problem. The legislatures of our States would then be authoritatively informed that of all the civilized countries on the globe the United States stand alone in neglecting to subject the railways to control; they would ascertain that in England a commission—a court, acting independently of Parliament and its ably-constituted committees—has been appointed, exercising very considerable control over railway freights and charges, over terminal charges and facilities, and the consent of which is prerequisite to all agreements between railway companies, such as working arrangements, compacts for pre-rating freights, leasing each other's lines, or amalgamations; that apart from all this machinery, exercising control over powers already granted, our legislatures would be informed of the safeguards which surround all private-bills legislation, and which prevent degeneracy into the abuses which characterize our legislative methods. They would discover how jealously England guards the granting of the right of eminent domain; that each bill involving the exercise of this prerogative power must be deposited a considerable period prior to the meeting of Parliament; that it must be accompanied by plans and a deposit of 5 per cent. of the money estimated to be necessary for the undertaking; that every private bill is sent to the Board of Trade for criticism and intervention; that it is subjected by the chairman of the House of Lords private-bills committee, Lord Reedsdale, if unopposed, to an examination as to form and propriety of passage; that it must pass the scrutiny of trained experts of the House of Commons, called examiners, who determine whether the standing orders as to publication, notice to all interested, and deposit of plans and money, before the parliamentary session begins, have been fully complied with; and if opposition is made by parties interested, there is a trial before committees of both houses, conducted by trained and respected advocates known as members of the Parliamentary bar (instead of by lobbyists), who proceed with the examination of witnesses, and the case is argued and summed up as though before a court. Thus care and judgment is exercised before grants of power are made to private corporations, and after they are made they are subjected to a constant supervision by the Board of Trade as to safety of the person, and by the railway commission as to exercise of powers, so that there is no stepping beyond the province of corporations, so that there is no usurpation of legislative powers by these corporations, without a peremptory "halt" cried by the public. With us, on the other hand, under our general railway acts, there is not only no such supervision, but the grant of the power of eminent domain is absolutely without legislative control and subjected to no private opposition or restraint, as the mere filing of a certificate clothes thirteen persons with all the powers of taking *in invitum* other people's property, and clothes them with all the attributes of a public or quasi-public corporation.

Question 4. In your opinion, can any proper legal or legislative remedy be provided for such discriminations against the commercial interests of New York City as you consider to be unjust?

Answer. In answer to the fourth question, I believe it to be within the province of the legislature of our State to enact, and through a proper tribunal to enforce, a statute preventing discriminations against New York City and State if the legislature sees fit to do its duty, and not in the future, as it has too often in the past, play into the hands of every sinister railway interest. If the courts do their duty by applying the common law remedies which now exist against conspiracies in restraint of trade, they would declare contracts void as against public policy, which level down a community to the condition of less naturally favorably-placed rivals. It certainly is within the province of the legislature absolutely to regulate railway charges for every pound of railway freight the roads carry. Whether it is wise for it to exercise the latter power is another question. I believe that it is not a body so organized as to perform so delicate a function as to make a freight tariff, but it can organize a tribunal to which railway charges shall be submitted as to fairness when made, or to which proposed changes of schedules of rates shall be first submitted, and which shall have the power to

sanction, and within strict limitations to modify, them, and which shall by a proceeding analogous to a trial have the power to determine the question whether a freight charge is a reasonable one or not. This function our judiciary are called upon constantly to perform in every case brought on a *quantum meruit*, and the difficulty is one of degree only and not of principle. The commissioners can arrive at just conclusions as to railway charges after the questions are argued by trained minds capable of dealing with them, upon evidence furnished by experts, with no greater difficulty than judges and juries are constantly contending with in determining rights as to the other manifold interests of society.

Question 5. As the law of the common carrier now stands, can any legal presumption that the rates to and from New York are unreasonable arise from the fact that they are higher than the rates which may from time to time prevail to and from certain other Atlantic seaports, even though the rates to and from such competing cities may be what are termed "war rates," and entirely unremunerative to the companies engaged in making them? Would the common law obligation as to *equal charges under like circumstances* apply here? Let me explain just what I have in mind in propounding this question. I wish to arrive at a correct statement of the facts in regard to the New York City "railroad problem." About two years ago Mr. Vanderbilt declared that New York should be *placed upon an equality with other Atlantic seaboard cities*. Precisely what this meant and in what manner and through what expedients it was to be done is, of course, matter of detail. But as I understand it, the New York merchants were entirely satisfied with what they deemed to be the spirit of the declaration. Mr. Vanderbilt holds at the present time that he has carried out that declaration in its true spirit, but some of the merchants of New York think he has not, and they point to the fact that a few months ago the rates were very much lower from Boston to the West than from New York to the West. They also point to other very marked discriminations, against the commerce of New York. Mr. Vanderbilt replies, and the New York Railroad Gazette declares that this Boston discrimination was simply a war upon the Grand Trunk and the Vermont Central Railroads for the purpose of forcing them to maintain such rates as would enable the New York Central Railroad to carry out its predetermined policy of placing and keeping New York upon an equality with the other Atlantic seaboard cities. It is evident that so long as railroads can freely exercise the power of making such discriminations as this for the purpose of preventing other discriminations, the railroads of the country will continue to be absolutely free to make just such discriminations as they may deem necessary and proper, subject only to the restraining influences of the competitive forces of transportation and of trade, and of that ever present and potential moral force—*public sentiment*. Whether the circumstances of the case do or do not present a direct issue as to the predominance of the interests of trade or of transportation is a question which must be left to the deliberate judgment of those most deeply concerned.

Answer. In answer to the fifth question, I would say that as the common law now stands there is nothing that amounts to a presumption that a rate previously charged is to remain the rate, or that such a rate is a reasonable one. The presumption as to common carriers in reference to a charge is this: that if under like circumstances a charge is made to another person for a similar service, this fact would be permitted to be shown with a view to prove what amount the company would consider as a reasonable charge; but such a presumption raised by such evidence is rebuttable. The charge may be shown to be less reasonable and fair than the higher one. The common carrier is bound to carry at a reasonable rate. I know of no principle of law to prevent his carrying at an unreasonably low rate for some special people. The only persons who would have a right to complain, as the law now stands, at this unreasonably low rate would be the stockholders, and as reliance upon them is quite sure to be an illusory one, legislation in addition to the common law is indispensably necessary to prevent unjust discriminations, in the making of very low rates to a favored few to the destruction of the business of others, which rates can, however, be shown to be unremunerative in character, and therefore not reasonable rates, at which the general business is to be done. Lord Cardwell's act, in England, hereinafter referred to, is a specific against this evil.

Question 6. In your opinion, will it be possible, under the existing law of corporations, for an apportionment scheme, such as that which now exists at New York in regard to west-bound traffic, ever to acquire a legal existence? In other words, do you consider contracts of this character to be *ultra vires* of corporate powers? In this connection will you please to state what modification of the law of corporations would be necessary in order that such contracts may acquire a legal existence, and what existing circumstances prevent the adoption of such a modification of the law? Please also to state your opinion as to the considerations of public policy which should prevail touching the recognition of apportionment schemes, with special reference to the commercial interests of New York.

Answer. In answer to the sixth question, I believe all the apportionment schemes, meaning thereby pooling arrangements and accompanying agreements to maintain

rates, to be *ultra vires* of corporate powers. It seems to me scarcely to admit of question that corporations are not permitted without special legislative sanction to enter into a partnership with other corporations in their earnings. Such is the case in all pooling arrangements; what amounts virtually to a co-partnership really takes place, disguised under another name. The facts are that the goods to be shipped are all practically placed in the hands of a commissioner to be distributed on a preascertained basis of interest in their carriage on the part of the respective corporations, the interest of each being affected by the earnings of each other road. This practically makes all the railways entering into an arrangement copartners in a common fund, which is made up of the earnings of each railway, distributed by the commissioner on certain fixed rates of interest, but which is not the equivalent of the earnings of each railway. What is this but a copartnership, which makes a stockholder of any one of the combining roads, as to dividend, dependent upon the receipts of a rival line in which he holds no stock, in which he has no interest, and over which he cannot exercise any control. Of course it is within the power of the legislature to make that which was yesterday against public policy to-day a matter of public policy by changing the law, but the law should not be changed so as to enable corporations to enter into co-partnerships, because it would seem obvious that all control over corporations by their own stockholders would thereupon cease. Two corporations having quite distinct purposes may reasonably be clothed with very different powers by the acts creating them, one of them being clothed with special powers which is denied to the other, yet by means of a co-partnership one with the other they can respectively transfer and give an extension to corporate powers far beyond anything we have hitherto known. It is my belief that no consolidation or amalgamation of railways or leasing, working, or traffic arrangements between one railway and another should be permitted, except with the consent of the legislature, upon adequate notice to every one interested, or under the supervision of a tribunal such as the Railway Commission of England or the Massachusetts Railway Commission. It is equally my conviction that the pooling scheme is illegal as the law now stands and against public policy, and virtually amounts to a conspiracy against competition and the public good. It is therefore in restraint of trade. Such combinations, objectionable as they are if entered into by private individuals, are much more offensive to the law in the case of corporations with strictly limited powers, and which have to a considerable degree the monopoly of the carriage of commodities. I would recommend no change in the law looking toward recognizing pooling schemes, but, on the contrary, would recommend the passage of a stringent act forbidding them, so as to prevent cavil as to or misinterpretation of the law by the courts.

Question 7. In your opinion, will it be practicable or possible for railroads to enter into compacts in regard to the apportionment of freight traffic under which the roads shall be jointly and severally held to the terms of the contracts with respect to the interests of third parties and to all the incidents legally arising from such contracts, although the contracts may not acquire validity before the law as between the railroad companies themselves? In other words, do you think that a one-sided compact of this sort, as to its validity, affecting the commercial interests of the whole country, could ever acquire stability and permanently subserve the interests of the railroads and of the public?

[In submitting to you this inquiry, I desire to mention by way of suggestion the fact that these apportionment schemes have no stable basis. The representatives of the roads meet together to-day and fix up an apportionment scheme which is essentially a compromise. Each one of the companies thinks it gets less than it ought to get, but each one clearly apprehends the fact that even upon a less amount of traffic under an apportionment scheme it would realize better results than upon a larger amount of traffic in a fight. In this fact is found the very life of all apportionment schemes which have come to my notice. Then consider what must be the history of every apportionment scheme. Changes are continually going on in the course of trade. Certain cities are acquiring and others are losing trade. Particular branches of trade are concentrating at certain points and leaving other points. Manufacturing interests are developing more rapidly in certain cities and districts than in others. Besides this, changes are continually going on in transportation interests. Some roads are growing stronger and others are growing weaker. New roads are being constructed and new routes and combinations of routes are being formed, &c. It appears to be evident, therefore, that an apportionment scheme which would substantially constitute an equitable division of traffic to-day might be very inequitable a year or two hence. Then what must be done? Why, the representatives of the roads must meet together and change the basis upon which they are working. So you see that like an ordinary partnership it would have to be terminable at the will of any one of the parties to it.]

Answer. In answer to your seventh question, I admit that among the difficulties in the way of carrying out the pooling arrangements are those which are suggested by you, but we must assume that, unless the public intervenes to prevent pooling arrangements in the future, the machinery for such arrangements will be perfected, possibly, by the adoption of Mr. Fiuk's idea of a corporation of corporations, and thus the gov-

ernmental power of the States and nation will be absolutely under the heel of such a corporation of corporations. The tendency to do this is very strong; the advantages of combination as against the disadvantages of competition is a constant bait to combine, and this makes it necessary that the community should use its combination of legislature and courts to prevent the combination of great corporations from capturing the powers of the State and using them without restraint and to the detriment of the people.

Question 8. Aside from those established principles of the law of corporations which may appear to determine the fact that railroad pooling schemes are against public policy or are *ultra vires* of their corporate powers, are there not certain characteristics of apportionment schemes which seem to preclude the possibility of any relationship between railroad companies in the nature of a partnership?

In this connection your attention is invited to the following considerations:

1st. Men resort to a partnership as an essential condition of good, whereas railroad companies resort to an apportionment scheme as an expedient for the prevention of losses incident to sustaining a hostile position towards each other.

2d. Men resort to a partnership from selection and voluntary choice, but railroad companies come together in an apportionment scheme merely from a sense of necessity and not from selection or choice.

3d. A partnership is a compact between friends, but an apportionment scheme is a truce between enemies; and generally the inducements which lead men to enter into a partnership are of a positive and co-operative character, whereas those which lead railroad companies to the formation of an apportionment scheme are of a negative and defensive character.

Answer. Your eighth question contains a number of valuable suggestions, which show the reasons that underlie the general public policy which forbids such combinations, and I fully agree that the reasons you set forth, in connection with many others which might be given, irresistibly lead to the conclusion that such co-partnerships should not be tolerated.

Question 9. What special commission or technical court should, in your opinion, be established for the determination of those questions which are continually arising in all parts of the country, and which may be classified under the three heads of *due facilities, reasonable rates, and discriminations*? In presenting your answer to this inquiry, please to state the existing practical difficulties in the way of securing justice in the determination of questions of this character: 1st, Owing to the fact that the duty of enforcing wholesome laws touching the prevention of the evils referred to is not properly embraced within the functions of the ordinary courts of justice; and, 2d, That the cases arising under such laws would be of such a nature that the lawyers and judges could not be expected to have any practical knowledge of them.

Answer. I believe that it is absolutely essential, both for reasons of State and the security of the public, that a commission should be instituted, composed of experts, which should determine the questions between the public and the railway—questions which constantly arise—as to whether due facilities have been afforded, reasonable rates have been imposed, or improper discriminations have been made by such railway corporations. The difficulties now in the way of holding railway corporations in check are partly governmental in character and partly judicial. Chief Justice Campbell declared, in 1867, in Parliament, that the English law courts were not competent to deal with these questions. He therefore urged the necessity of organizing a tribunal where such questions may be discussed by a specially trained bar and acted upon by a specially trained bench. Subsequently, in 1872, the joint committee of Parliament united in a report recommending the appointment of such a tribunal, and finally, in 1873, the British Railway Commission was organized. This commission has now been in existence almost six years, and the importance and character of the questions it is called upon to determine may be gathered from the five reports already issued by it. The Cardwell act of 1854, required prorating on all the English railways, so that any railway could send goods over the line of another railway, and thus make a through rate upon reasonable terms, to wit, a rate equivalent to what would be charged by the receiving company for like traffic over its own line. The act further provided that the terms upon which the railways shall carry shall be the same for all. By a previous statute (7 and 8 Vic., ch. 85) the Board of Trade was authorized to institute legal proceedings to enforce the duties and liabilities of railway companies in addition to the remedies afforded to the parties aggrieved, and the 1854 act conferred upon the court of common pleas the jurisdiction to entertain the controversies which would arise thereunder. The act of 1873 transferred this jurisdiction to the railway commissioners, and enlarged their powers by giving them jurisdiction over the question of reasonable charges within the maximum rate fixed by Parliament in the special acts creating the railway corporations; they likewise have jurisdiction over the question of terminal facilities, embracing their adequacy and the reasonableness of terminal charges, also can enforce the publication of rates and compliance with the published rates; and the act of 1873 allows them to sit as arbitrators to determine disputes between railway

companies as to agreements theretofore made, and transfers to them the powers heretofore vested in the Board of Trade, to supervise all working agreements or leases between railway companies or railway and canal companies, and to withhold their sanction from the same if they see fit; and without such approval they cannot become operative.

According to the five annual reports of this commission, it appears that under every one of these provisions decisions have been rendered and action taken. The commission have in one particular case gone so far as to determine that a particular railway company was to build station facilities. This decision has given some alarm, because it is difficult to draw the line as to what expenses a corporation may not be called upon to incur, if the commissioners, on the plea of affording terminal facilities, can require stations to be built; but the character of the members of the commission is sufficient guarantee that they will not overstep the bounds of reasonableness. Sir Frederick Peel, a son of the famous prime minister; Mr. Price, formerly chairman of the Midland Railroad, and Alexander Edward Miller, a lawyer of eminence, who was appointed in place of Mr. Macnamara, deceased, are the present commissioners. The railway companies of England's objections to the commission, as far as personal inquiry both among railway presidents, practitioners at the parliamentary bar, and commissioners have enabled me to ascertain, are—

1st. That there is no appeal from its decision to the higher courts; and as two of the commission are laymen, the representatives of the companies believe that the right of appeal in cases affecting such large interests as those which come before the commission should be secured to the litigants. In cases of law, an appeal lies if the commissioners certify that it is a serious question of law. I am disposed to agree that this is a well-grounded objection, although one of the objects of creating a special tribunal was to counteract the enormously oppressive character of the exercise by these great corporations of the power of appeal, and by means of which they can and do wear out a weaker adversary, however meritorious his case. Railway attorneys and barristers have general retainers, covering their labors for the year, and it was comparatively a light charge upon the railway company to carry causes through the courts.

2d. They object to the tribunal that a majority are laymen. If a majority were lawyers, they would likewise object for the opposite reason, that lawyers are not the proper persons to deal with railway questions. Whatever force there is in this objection arises, however, from the absence of appeal. It is now universally conceded by railway officials themselves—and I have conversed with the leading ones during my recent visit to England—that a special tribunal should exist to exercise the control and the functions of the commission; but they want it to be, as near as I can get at it, a branch of the supreme court of judicature, such as the divorce and bankruptcy courts are, instead of an organization apart from the judicial organization. It will necessarily be some little time before new machinery gets into proper working order, and particularly is this the case when there is so active an opposition as that of the railway companies to the commission. But I cannot do better than to quote the words of Mr. Howard, a prominent member of the parliamentary bar, representing railway interests, from an article by his pen in the June number, 1878, of *Fraser's Magazine* on "The Railway Commission and its work":

"Grievances are so numerous and so various in kind, that it would be impossible to provide in an act of Parliament the necessary details, showing how each case was to be dealt with. A more elastic system is demanded. The commission should be entrusted with the necessary discretionary powers—in fact, be constituted a permanent board of arbitration. In the railway commission we have a tribunal capable of dealing fairly and impartially with matters in which practical working is involved. The number and variety of cases which have been before them and upon which they have given just decisions is proof of the value of the tribunal. Attempts will be made to show that the tribunal, judged by the amount of work it has to do, is costly; that the business of the court is gradually declining in amount, and not, therefore, worth the cost of maintenance; but the value of the tribunal is not to be thus measured. Its importance as the guardian of the public interests in the various branches of railway management can scarcely be overestimated, for its very existence holds in check, to no little extent, the exercise by railway companies of an arbitrary policy; and the vigorous manner in which the commissioners have defended the right of the public has forced the companies to a settlement of disputes. The legal profession, as a body, have never taken kindly to the new form of jurisdiction, and have viewed with jealousy what they regard as an innovation upon the established courts of law. Opposition may therefore be expected from this quarter. One object sought in the appointment of the commissioners has, to a great extent, been attained, the materials needed for the construction of a new and amended act have been produced, the administration of which, whilst it would confer increased public benefit, would certainly be no source of prejudice to railway shareholders, if indeed it would not exercise the very opposite effect." It must not be forgotten that England in addition to the safeguards against the power of these great corporations by means of the Board of Trade which must approve every by-law of these corporations, never left railway corporations absolutely

without control, and all railways must obtain their power from Parliament by special act, to take property for purposes of building its road-bed or making its stations. Nothing can be sprung upon the community unawares. All private bills must be filed a certain period before Parliament convenes. Their purpose must be advertised in the official gazettes, notices must be given to all persons interested so that all objections may be filed, which objections partake of the nature of pleadings; and the evidence pro and con on the petition and objections is regularly heard in the same manner as in trials at law. Indeed England's method of private bill legislation is a very much better safeguard to the public, than the recent constitutional amendments which have run their course through various States of the Union, forbidding private and special laws in certain cases, and thus subjecting the general body of the law to be arbitrarily changed under the pressure of special and private interests.

Question 10. Do not the fact that the Erie Railroad charges the same through rates as the New York Central—one of the largest dividend paying roads—and many instances of a similar character in other parts of the country go to show that competitive freight charges must generally be equal, in order that competition may exist at all, and do not these facts also go to show that in practice rates are determined mainly by competition between transportation lines and between trade forces, and that they are only indirectly affected by the consideration as to the amount of capital of any particular road, the cost of the road, or the actual cost of transporting freight over the road?

Answer. In answer to the tenth question, it seems to me that in politics no more than in any other department of knowledge does a single instance prove much. While it is true that competitive rates are at times maintained between railways having the same terminal points, which may influence and regulate to a considerable degree their tariff, yet that competition does not prevail to the same degree in railway enterprises as it does in other affairs, and that an exception to the general operation of the law of competition has been demonstrated to exist in the case of the railway is the opinion of every one who has studied the operation of the law of competition in its application to railways. Combinations in railway action and policy, being more easily possible and offering greater inducements in the way of permanent beneficial results to the combining parties than in any other business, excludes competition as a permanent regulator of the price at which transportation services are to be rendered.

APPENDIX No. 3.

INFORMATION FURNISHED BY CHARLES RANDOLPH, ESQ., SECRETARY OF THE CHICAGO BOARD OF TRADE, IN REGARD TO THE TRANSPORTATION AND COMMERCIAL INTERESTS OF THAT CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

Question 1. Please to describe the growth of the direct exportation of Western products from Chicago to Europe.

Answer. There is no record available indicating the beginning of this form of business. Previous to 1865 very considerable purchases of Western products were made on orders from Europe, and to some extent Western shippers exported grain and provisions to Europe on their own account. Generally, however, such shipments were consigned to some seaboard city and thence were shipped to their destination, the ocean transportation being arranged for on arrival of the property at the seaboard by the consignee there. In 1856, during the Crimean war, large quantities of wheat and flour were purchased in Chicago on orders direct from both England and France; these were generally filled by shipments via New York or Montreal, having a subconsignee at those cities. Some, however, were shipped (in the winter) by way of Cairo and New Orleans, as at that time no one thought of shipping grain by all rail to the eastern seaboard cities. Later, in 1857, I think, two or three lake vessels were loaded with grain and cleared direct for Europe, passing through the Welland Canal and St. Lawrence River. Some of these, and at least one foreign vessel (Scandinavian), arrived direct from Europe with cargoes. These ventures were not, however, attended with sufficient profit to justify their continuance; the vessels were too small to render their use in that trade profitable, and the business fell back to the process of reshipment at seaboard cities, but really amounted to but little for several years following. When the Grand Trunk Railway of Canada, was completed to Portland in 1864, that corporation began to make efforts to secure business from the Western States, and by its connection with Chicago via Michigan Central Railroad, sought to inaugurate through shipments of rolling freight, no attempt being made to induce shipments of grain in bulk by that route until several years subsequently. I have no data as to the amount of these shipments previous to 1865, but there were some made in 1864. Since 1864 the shipments on through bills of lading issued in this city have been as follows:

Year.	Flour.	Wheat.	Corn.	Other grains.	Provisions.	Miscellaneous freight.	Total.
	Barrels.	Bushels.	Bushels.	Bushels.	Packages.	Packages.	Tons.
1865						30,848	8,912
1866						8,380	1,904
1867						22,958	4,619
1868						19,880	4,576
1869	44,004	5,220			9,968	930	7,213
1870	99,353	84,519			24,186	391	17,921
1871	32,031	131,960			58,770	3,087	21,081
1872	16,293	268,617	388,970		230,543	8,856	77,953
1873	131,417	1,420,948	8,600		310,296	21,269	132,474
1874	64,468	980,193	208,647		278,754	64,765	113,776
1875	79,767	2,440,713	708,979		309,059	50,504 *15,385	219,387
1876	83,280	1,199,718	2,316,206	586,564	696,840	102,743 *16,195	314,507
1877	74,121	1,954,687	1,620,575	137,238	640,776	522,389 *1,734	309,185
1878	147,028	6,121,681	4,149,552	209,208	907,027	681,305 *7,876	602,018

*Tons.

In the foregoing statement under the head of provisions are included only hog and beef product; under the head of miscellaneous freight is included butter, cheese, tallow, hides, leather, seeds, oil-cake, alcohol, etc. The bulk of these shipments have been made from Chicago by rail, though some of the flour and grain have gone for-

ward by lake; all except a portion of the bulk grain, has been shipped by steamer, on the ocean; a portion each by way of Montreal, Portland, Boston, New York, Philadelphia, and Baltimore. Aside from these shipments, during the time covered by them, there have been other shipments to an unknown, but very considerable extent, both on foreign orders and for account of the shipper; these have been consigned to parties in the seaboard cities for forwarding to Europe, the ocean freights being arranged for at the East. The demand for American meats abroad, has had the effect of very materially modifying the manner of the cut and cure of hog product in this city, it being accommodated to the various styles most in favor in different parts of Great Britain and the continent. Several of our largest packers confining their cut and cure almost exclusively to the wants of that trade. Some of these cuts are so peculiar that they could scarcely be sold at all in this country, while no other will be freely purchased in some parts of Europe; this particularly applies to the interior trade in England. These cuts are very little dealt in in this country and are generally sold by the packer direct to the exporter, or are shipped direct by the packer on his own account. In the matter of grain, and indeed all other commodities shipped, much the largest portion is exported on orders for account of parties in Europe. Our local shippers generally prefer to consign only to the seaboard, availing themselves of either the eastern or foreign market as they may elect after arrival of property at the seaboard.

Question 2. Please to present such facts as will show the relation of the through rates which have prevailed from Chicago to Europe for direct shipments, and the rates which have prevailed by combination of the rail rate to the seaboard and the ocean rate thence to Europe.

Answer. I suppose a comparison of the rates for 1877 will be sufficient for the purposes you desire. In fact, I have no reliable data for previous years by which to make such a comparison. During 1878 the rates were very irregular on through shipments and would not so well represent a normal condition of the business as those of the previous year. From May 1st to December 31st, 1877, the two rates on wheat were about as follows: Previous to May the 1st, there was so little demand for wheat for export shipment, that nominal quotations are of little value.

Weeks ending—		All rail, Chicago to New York; wheat per bushel.	Ocean (steamer) rate New York to Liverpool; wheat per bushel.	Combined all rail and ocean steam rate Chicago to Liverpool; wheat per bushel.	Through rate Chicago to Liverpool, rail to New York and thence by steam; wheat per bushel.
		Currency.	Gold.	Mixed.	Gold.
		Cents.	Cents.	Cents.	Cents.
May	5	18	12	30	33
	12	18	11	29	27.9
	19	18	12	30	28.8
	26	18	14	32	30
June	2	18	13½	31.5	30
	9	18	11	29	28.8
	16	18	8	26	25.8
	23	18	8½	26.5	26.4
	30	18	10	28	27.9
July	7	18	9	27	27.9
	14	18	10	28	30
	21	18	12	30	27.9
	28	18	11	29	27.9
Aug.	4	18	12	30	34.2
	11	18	17	35	34.2
	18	18	16	34	36.4
	25	18	22	40	41.4
Sept.	1	18	23	41	41.4
	8	21	30	41	41.4
	15	21	21	42	41.4
	22	21	21	39	41.4
	29	21	18	39	37.1
Oct.	6	21	17	38	37.1
	13	21	18½	39.5	42.6
	20	24	20	44	42.6
	27	24	20½	44.5	45.3
Nov.	3	24	18½	42.5	44.4
	10	24	17	41	40.8
	17	24	16	40	38.6
	24	24	16½	40.5	40.2
Dec.	1	24	16	40	40.2
	8	24	15	39	39
	15	24	16	40	40.2
	22	24	17	41	41.1
	29	24	19	43	43.2

In the above combined freight rate only the actual freight is included; to it should be added New York charges for weighing, transferring, and a small commission for attending to the business of forwarding, say in all $1\frac{1}{2}$ to $1\frac{3}{4}$ cents per bushel. This will, in nearly all the cases cited above, bring the combined rate higher than the through rate. A small advantage is gained by the combined rate in the fact that the freight to New York is payable in currency, whereas all of the through rate is gold; but this for 1877 was very insignificant.

Question 3. Please to present a statement touching the relative advantages of direct shipments from Chicago to Europe, in comparison with the advantages afforded by shipment to Atlantic seaports, with the option of the market at those points; also a similar statement in regard to direct importations from Europe and the purchase of imported goods at New York.

Answer. The principal advantage in shipping direct, when the shipment is made on consignor's account, is in the generally lower cost of transportation as shown by the foregoing table. There are times when still greater advantage in this respect is given to the shipper via Boston, Philadelphia, or Baltimore. Again, the draft made against the property when shipped on a through bill of lading can be made here direct on the consignee in Europe, a saving of interest and a commission to an intermediate agent at the East, upon whom, in the other case, a bill would be drawn, he to be reimbursed by making a bill on the European consignee. As previously remarked, however, our local shippers usually prefer to consign to Eastern cities only, with the option of sales there, or ultimate shipments to Europe. In the case of property ordered on foreign account the advantage of through shipment is more marked. It has grown into a custom in Europe, especially in England, to sell property to arrive, sometimes, as in the case of California wheat or East India or South American goods, as much as four to six months in the future. The merchant, being able to make such a sale, will give an order for a cargo at a limit of cost, freight, and insurance that, if filled, would leave him a satisfactory margin of profit. He cables his order here, and if it can be filled he is so advised at once, and he closes his trade with comparatively little risk. Or, being on the ground and understanding the prospective wants of his market, he may order, taking his chance for profit on an anticipated advance; this last is, however, a more or less speculative venture, but in either case he knows just what his cargo will cost laid down at its destination in due course of transit. He saves unnecessary charges for commission, &c., at the seaboard, and secures whatever of advantage there may be in a through rate. In the case of meat he gets it as originally packed. The repacking and handling in the Eastern cities is a considerable injury to meats; and usually he wants a particular packer's brand which he may not be able to get if he orders from an Eastern city. In the matter of importations the principal advantage is in the saving of damage to goods by repacking at the port of first arrival, and the delay in passing through the custom-house there. There is, perhaps, a trifle saved in freight and intermediate handling and forwarding charges, but this is probably fully offset by the annoyance of furnishing the exorbitant bonds required by the government. Many of our leading houses maintain a representative in the European markets, buying and shipping the goods needed for their trade. Others order direct from the manufacturer in Europe. In this way importations can be placed on sale in this city about as early as they can be in the Eastern cities. There is no doubt great advantage in an established reputation for judicious selections and prompt, direct importations; purchasers prefer to buy of a direct importer rather than from second hands. A Chicago importer can count with reasonable certainty as to when his goods, shipped at a certain time from Europe, will reach him if consigned direct; whereas, if they are to be stopped at the port of first arrival for examination and appraisement, he cannot even approximate to the time when he will get them. The handling especially of valuable or fragile goods is frequently attended with damage which must fall on the owner; and goods are rarely repacked as carefully as they were originally. It is some advantage, too, that the importations of prominent Western merchants shall not be advertised to Eastern competitors from two to six weeks before they are received by the consignee, as they are liable to be if they are passed under the inspection of Eastern appraisers. I think but few goods of any kind are consigned from Europe direct to Chicago on shipper's account.

Question 4. Please to prepare a table showing the value of foreign merchandise imported at Chicago each year and transported to Chicago without appraisement at the port of entry under the provisions of the act of July 14, 1870, also the duties thereon.

Answer. Our custom-house is not supplied with books and sufficient assistance to keep this portion of the imports separate from the others, and the only report I am able to get is from the Annual Report of the Bureau of Statistics, Washington, and I find no report of this business prior to 1873. In fact, I do not think there was much business done under that act until after July, 1872.

The reported importations at Chicago under the act of 1870, so far as I have data for determining it, was as follows:

Years ending June 30-

1873.....	\$3, 160, 756	1876.....	3, 061, 216
1874.....	\$1, 953, 530	1877.....	2, 221, 984
1875.....	2, 683, 118	1878.....	2, 618, 971

It is quite impossible, for the reasons already stated, to give the duties collected on these goods separately. A portion of them are reported as not dutiable, and in addition to goods received under the act of 1870 there are large importations of tea, coffee, and other free goods, that do not appear in the custom-house records at Chicago in any form.

Question 5. Please to present a similar statement in regard to merchandise imported and appraised at other ports and transported to the port of Chicago each year during the last ten years.

Answer. The records of the Chicago custom-house having been destroyed by fire October 9, 1871, no information can be obtained from that source of any importations previous to that date. From data of my own I give the importations in bond for 1869 and 1870, but have no account of duties paid in those years:

Statement showing importations at Chicago in bond, the goods being appraised at ports of first arrival.

Year.	Value..	Duties.	Year.	Value.	Duties.
1869.....	\$933, 205	Not known.	1875.....	\$356, 832	\$111, 787 29
1870.....	1, 113, 464	Not known.	1876.....	460, 440	123, 565 11
1872.....	1, 485, 825	\$584, 956 91	1877.....	582, 066	183, 523 59
1873.....	360, 120	154, 453 32	1878.....	343, 530	136, 982 31
1874.....	220, 866	98, 675 11			

For 1871 I have neither the value nor the duties collected.

Question 6. About what proportion of the total value of imported goods received at Chicago is imported directly from Europe, either with or without appraisement at the seaboard; and about what proportion of such foreign goods (i. e. from Europe) is purchased at New York, or at other Atlantic seaports?

Answer. To the first of these inquiries I can give no further answer than may be gathered from the answers to the two previous questions (4 and 5). It is impossible, from any records kept in our custom-house, to determine from whence goods are imported, except as may be inferred from their character. The government at Washington keeps a detailed record of goods imported at ports of first arrival and of the countries from whence they come, but that record stops at the port of first arrival.

As to the second branch of the inquiry, I know of no means of determining, even approximately, the proportions between European goods sold in Chicago, imported direct, or purchased in the Eastern cities. The amount purchased at the East, no doubt, largely exceeds those imported direct, but having no means of verifying an estimate, I should prefer not to hazard one. Comparatively few of our merchants import direct, and they not nearly as much as they sell of imported goods.

Question 7. What hinderances of any sort now repress the direct importation of foreign goods at Chicago?

Answer. First, I would place undervaluations at the seaboard cities, or some method practiced there of getting goods through the custom-house at much less cost than here. This applies more particularly to goods subject to a high duty, especially to silks. It has become notorious that imported silks can be purchased of jobbers in New York for considerably less money than the same goods can be imported for with full duties paid. So that our leading importers of dry goods have pretty much ceased the importation of such goods and make their purchases largely in New York; the same also applies to other classes of goods to a greater or less extent. Next I would state that the larger allowances for damages on goods at the East than here (especially on perishable property) has resulted in compelling many importers to either have their goods pay duties at the seaboard or abandon importing, purchasing their supplies at the East. Both of these questions will, I presume, be fully treated in the report of a commission recently appointed by the Treasury Department, and which, as I understand it, have been taking testimony on these points. The matter of excessive bonds required by the government for importations to the interior under the act of July, 1870, bears with great severity on the smaller importers. The more wealthy firms are able to arrange this matter, through the bonded transportation companies, without much inconvenience, and this fact may be considered a reason why the larger importers have made so little protest against the exorbitant demands of the government in this respect: they are able, from their position of high commercial and financial standing, to practically "freeze out" all small competitors who would be inconvenienced or unable to furnish the bonds required. The general regulations in respect to importations under

the act of 1870, though modified from those originally in force, are still (as we think, under the influence of Eastern importers and custom-house officials) felt to be calculated to discourage the business, and certainly tend to restrict it.

Question 8. Please to present a table showing the rates which have prevailed from ports in Europe to Chicago on direct shipments in comparison with combined ocean and rail rates, in cases when similar commodities were imported through Atlantic seaports. Three or four commodities may be referred to.

Answer. I am not able to make as satisfactory a response to the inquiry as I should be glad to do, and I cannot furnish the comparative schedule of rates referred to; through consignments are usually made on a through rate of freight, generally, as I am informed, at about the current ocean freight and the inland rail freight combined on the various classes of goods. In case the inland rail freight advances or declines after the shipment and before the arrival at the seaboard, that would be to the advantage or disadvantage, as the case might be, of the owner; no variation would be made in the through contracted rate. The competition for freights from Europe to Western cities under the immediate transportation act of 1870 is not very spirited on account of the bonds required to be given by the transportation companies and the additional trouble and care necessary in doing that business as compared with ordinary traffic. Nearly all the goods received at Chicago under the act of 1870 come by one transportation fast-freight line.

Question 9. At about what time was the system of issuing through bills of lading from Chicago to ports in Europe, and from ports in Europe to Chicago, inaugurated?

Answer. As stated in the answer to interrogatory No. 1, the business of issuing bills of lading direct from Chicago to Europe was inaugurated about 1864; this refers to rail shipments from Chicago. An earlier business was done in the manner described in answer to No. 1. It is quite impossible, from any data available, to determine when through shipments from Europe to Chicago commenced. I think as early as 1851 or 1852, railroad iron and other heavy freights were shipped from Europe to Chicago; these of course paid duty at the seaboard and were consigned to the care, for forwarding, of some house there. Such were in every proper sense through shipments, and were so expressed on the original bill of lading, but they were not usually, if at all, shipped on contracted through rate. No considerable amount of importing in dry goods by Chicago merchants was done until about 1864 or 1865, and these, until the act of July, 1870, came into force, could only be consigned to the port of first arrival, there to be appraised and forwarded as indicated in the shipment. The amount of goods (value) received in bond, as far as I have data for it, is shown in the answer to No. 5.

Question 10. Have through rates ever been made on shipments by the Illinois Central Railroad via New Orleans to Europe, and have there ever been any direct importations at Chicago from Europe via New Orleans?

Answer. Not that I ever heard of.

Question 11. To what extent have products of Cuba, South America, Central America, or Mexico, been imported directly at Chicago via Mobile or via New Orleans, and have such importations yet assumed the form of a regular trade.

Answer. The amount of direct importations at Chicago from the countries named, via either Mobile or New Orleans, have been quite insignificant, consisting mainly of tropical fruits, coffee, and cigars, with perhaps some sugar. Duty-paying goods imported via these cities are passed through the custom-houses at the port of first arrival, and usually duties have been paid there. There are no arrangements perfected for direct importations under the act of July, 1870, via either of those cities.

Question 12. Please to describe generally the functions of the Chicago Board of Trade in so far as relates to the regulations which are imposed upon its membership in buying and selling products; touching, first, the restraints imposed upon merchants in the course of trade; second, the protection afforded to merchants in the course of trade; third, as to the general effect of such regulations upon the trade of the city; fourth, as to the legal force of its rules; and fifth, as to the nature and extent of its influence upon commercial credits.

Answer. The object of the Board of Trade of Chicago, as stated in the preamble to its rules and by-laws, is "to maintain a commercial exchange; to promote uniformity in the customs and usages of merchants; to inculcate principles of justice and equity in trade; to facilitate the speedy adjustment of business disputes; to acquire and to disseminate valuable commercial information, and generally to secure to its members the benefits of co-operation in the furtherance of their legitimate pursuits." Its membership embraces representatives of all the leading branches of business in the city, and, as opportunity offers, it interests itself in questions affecting the general business interests of the city, and to some extent those of the country. While this is true in a general way, it is also true that much the larger portion of its members are engaged in business directly connected with the manufacture, purchase, or sale of the agricultural products of the Northwestern States, including flour, grain, provisions, seeds, &c. These articles are dealt in by its members at their regular meetings on 'Change, Chicago being the terminus of all railroads centering there, all property, *except a very*

limited amount shipped by through fast freight lines, is billed either to be unloaded at some depot, elevator, or dock, or into the cars of some connecting line; very few cars go through the city without unloading, so that the city has come to be a great depot for the distribution of these articles and a leading market of the world for their purchase and sale. The facilities of the city for the handling of these products which are well and widely known, and its superior advantages for transportation to and from, besides offering inducements to both producer and consumer and their representatives as a convenient point to sell and buy these commodities, also makes it a desirable place to conduct speculative operations in their purchase and sale. These operations have grown to very great proportions, and are conducted not only on behalf of members themselves, but to a much greater extent by order and for account of parties not members, who carry on their operations through members acting as brokers and commission merchants. Very much the larger portion of these speculative orders, which are confined mainly to grain and the various forms of hog product, are from parties residing at points more or less distant from the city, especially in the large commercial cities of the country, whose orders are usually communicated by telegraph.

The magnitude of the transactions of the members of the board and the rapidity with which they are consummated has rendered it necessary, for the protection of the members themselves and of those for whom they deal, that well-defined rules and regulations should be established in respect to the rights and duties of the parties to the transactions. These rules are very elaborate, extending to all supposable points that are liable to arise touching the transaction, whether it be one involving the immediate or future delivery of property. No transactions are recognized by the rules of the board that do not contemplate the actual delivery of property or the settlement of a contract previously made for an actual delivery. The rules of the board do not assume to bind persons not members of the association, but the courts have held that if a party directs a purchase or sale of property on the board he is supposed to know the rules under which his agent must act, and to consent to their application to any transaction he may direct to be made by members of the board for his account. But to answer the question more in detail:

"First, as to the restraint imposed upon merchants in the course of trade."

There may be said to be no restraint as to when, how, or to what extent members may trade, except that in the matter of trades in grain for future delivery they shall be made only between 9½ o'clock a. m. and 3½ o'clock p. m.

"Second. The protection afforded to merchants in the course of trade.

All property, unless otherwise agreed (which embraces comparatively insignificant transactions), is payable for on the delivery of the property itself or of a warehouse receipt or other voucher that will control it. If sold for immediate delivery it must be delivered and paid for within twenty-four hours in any case, and generally within much less time. Grain, flour, and provisions, unless sold by guaranteed sample or brand, are sold subject to inspection; grain, by inspectors appointed by the State; flour and provisions, by inspectors appointed by the board; this is always understood without being so stated. In purchases for future delivery both parties to the contract are at liberty to require the deposit of money, in some approved bank, to the extent of 10 per cent. on the contract value of the property purchased, as security for the faithful performance of the contract, this to be kept good in case of change in the market value. In case this security is not deposited within one banking hour after demand, the party calling for the deposit is at liberty to close the contract by a purchase or sale, as the case may be, for account of the delinquent, and any loss resulting by such repurchase or resale is due and payable immediately. In case any member neglects, refuses, or from any cause fails to fulfill his commercial agreements he is liable, on complaint by an aggrieved member, to be suspended from all privileges of the association until the matter is satisfactorily adjusted, or in cases of an aggravated character the party may be expelled. These regulations tend to restrict the obligations assumed by members within their ability to protect the same, and undoubtedly tend to a higher order of credit than could be maintained in their absence.

"Third. As to the general effect of such regulations upon the trade of the city."

To this I answer, emphatically, that they tend to promote trade in every department. The great crops of the Northwest frequently move in immense volume and must find either a reservoir into which they may be emptied to be drawn from as needed or as may be convenient, or they must be pressed to sale to shippers or consumers in such quantities as would inevitably break prices much below their true level. This reservoir the granaries and warehouses of Chicago supply, and the speculative element of the market stands ready at all times to absorb all that is offered for sale at its full value, operators forecasting the future of probable supply and demand, and making purchases on that probability rather than on the augmented or diminished supply of the moment. If the producer or interior merchant desires to hold his property in the city for an anticipated advance, he can do so at small expense; and if necessary to meet his obligations or keep his business moving he desires to obtain temporary advances upon it, he can do so to very near its full value. Where the agricultural prod-

acts of a given district of country are sold these supplies are likely to be purchased, and hence those engaged in the ordinary mercantile lines become the sellers of all classes of goods to those producing sections whose surplus is turned into money at their business points. If this city only acted as a forwarder of agricultural products instead of a purchaser it would in turn become the forwarder of goods purchased of Eastern merchants by the interior merchant or consumer, and if the speculative element were eliminated from the Chicago market and sales were confined to and depended only upon orders from consumers or others for actual shipment, Chicago would have the same experience that New York frequently has had, of no possibility of effecting sales except at a material and unnecessary abatement in price. No better argument as to the desirability of encouraging the speculative element in produce (of course within proper limits) can be found than the extraordinary efforts of New York, Baltimore, and Saint Louis within the past two years to establish and foster it in those cities.

"Fourth. As to the legal force of the rules of the Board of Trade."

These have always been sustained by the courts in their application to members of the board, and generally in their application to parties having transactions with members understood to be or from necessity brought under those rules. Occasionally cases have been decided adversely to parties where the rules have not been technically observed, and in a few instances courts in other States have held that trading for future delivery was in the nature of gambling and claims based on such transactions could not be enforced, but in all or nearly all cases of such decisions the court has either confounded the transaction with a class of transactions prohibited by the statutes of the State of Illinois, and not recognized by the board as business transactions, or has shown so entire a misapprehension of business principles as to render it a subject of contempt to business men of any class.

"Fifth. As to the nature and extent of its influence upon commercial credits."

The influence and effect of the stringent rules of the Board of Trade as between members is to establish a higher order of credit among themselves in their dealings with each other, and they also tend to strengthen confidence in members of the board among those not members who do business with them. Beyond this I do not know that they have any particular influence.

Question 13. Please to present a statement in regard to the growth of the live-stock trade in Chicago, embracing facts in relation to the establishment and growth of the Chicago stock-yards and the manner in which the trade in cattle is there carried on with respect to the interests of purchasers and the railroad lines.

Answer. The figures below show the receipts of cattle and hogs at Chicago since 1857. I have no data for earlier years that are sufficiently reliable to introduce here:

Year.	Cattle received.	Hogs received.	Year.	Cattle received.	Hogs received.
	No.	No.		No.	No.
1858	140,534	416,225	1869	403,102	1,661,869
1859	111,604	188,671	1870	532,964	1,693,158
1860	117,101	285,140	1871	543,050	2,380,083
1861	204,239	549,039	1872	684,075	3,252,623
1862	209,655	1,110,971	1873	761,428	4,337,750
1863	304,448	1,606,818	1874	843,966	4,259,629
1864	338,840	1,285,871	1875	920,843	3,912,110
1865	330,301	757,072	1876	1,096,745	4,190,006
1866	384,251	933,233	1877	1,033,151	4,025,970
1867	329,243	1,696,689	1878	1,083,068	6,339,654
1868	323,514	1,706,592			

Previous to 1858 the business in live stock had been steadily increasing, but the exact figures were never gathered and compiled in any reliable form. The receipts of sheep have averaged about 320,000 head per annum for the past six years, and within the same time those of horses have ranged from 7,800 to 20,200.

In the earlier years stock was driven in on foot. Later, as the railway lines began penetrating the interior, it arrived in part by rail, that mode of moving it growing in favor until about 1864 or '55, since which it has practically become the only mode of bringing the stock to market. A few hundred head are yet driven in each year, but only from points near by. Until about 1854 there were no general stock-yards. In that year a market and yards were established near the western city limits, now two miles within the thickly-settled portion of the city. Still later, yards were established on the Lake Shore accessible to some of the railway lines (as the first were not), but remote from any of the city slaughtering establishments. Stock purchased for packing in the city had to be driven considerable distances through the streets, one of the largest packing-houses being located near the extreme northern city limits. The facilities for connecting the Western with the Eastern railroads for the transfer of stock being unsatisfactory, the railroad companies, through their officers, organized the "Union

Stock Yard and Transit Company" in 1865, and having purchased about 300 acres of land south of the city limits, proceeded to construct the present stock-yards, which were opened for business late in that year. To these, every railroad entering the city has direct connection, and all stock arriving by rail is delivered directly to the yards. These yards inclose at present about 200 acres, having been enlarged several times since their construction by inclosing a larger area of the company's land. The present capacity of the yards for the care of stock is for about 15,000 cattle, 200,000 hogs, 10,000 sheep, and 1,000 horses. Much the largest portion of the stock received (in fact nearly all of it) is consigned to commission merchants who make that branch of business a specialty, or is accompanied by the owner or his agent. A regular exchange is located within the grounds, where buyers and sellers, both for shipment and local slaughtering, congregate and effect sales. A considerable business is also done in cattle only partly fattened, interior feeders buying and taking back into the country such as they have facilities for improving in value. These are again returned to market at a later day. A national bank and a large hotel are also located within the grounds of the company, so that, so far as effecting their purchases and sales are concerned, dealers need not visit the city proper at all. Cattle for shipment are billed direct from the yards. The facilities for handling, feeding, and caring for the stock are unsurpassed by any arrangement for similar purposes in the world, and that they are of great advantage to both dealers in stock and to the railroad companies receiving and shipping stock admits of no question. Buyers and sellers are brought into close contact; with all the stock on sale before them, each can determine the relative supply and demand, and very much greater uniformity in values or prices are maintained than would be possible under a system embracing two or more markets in the same city.

About the only complaint that has been made against the management of the yards has arisen from alleged unnecessarily high charges for feed; that there is some ground for this is probably quite true. The usual charge has been for hay about \$30 per ton, and for corn about a dollar per bushel. The handling or toll charges are very reasonable, being only 8 cents per hog and 25 cents for cattle. These of course do not cover commission for selling or buying, with which the yards have nothing to do.

The facilities for unloading and loading cars, and the economy of time in the matter of car service, tend to reduce the actual expense of transportation materially; and the fact that all the business is done at one point enables all dealers in stock to transact their business with less expense of employes than if it was scattered in numerous places about the city.

Question 14. Please to present facts in relation to the origin and conduct of the operation known as "evening," by which the railroads leading out of Chicago have been enabled to maintain rates on the transportation of cattle, and to secure to each road its share of the cattle traffic upon an agreed basis of apportionment, mentioning the roads which are parties to the compact, and the proportion of the total traffic which is accorded to each line. In describing this compact please to state how it affects the interests of producers at the West, the interests of Western traders, the interests of Eastern traders, the interests of the transportation lines, and the provision market of the city of Chicago and of the country generally.

Answer. This is a matter concerning which it would be very difficult, if not entirely impossible, to ascertain with entire certainty all the details. The arrangement is not one that is published to the world, and it is not to be supposed that the parties to it would develop anything prejudicial to themselves, if there be such, in their compact. I have taken some pains to verify the following from those who are in position to know all the facts, and I believe the main points are correctly stated.

The live-stock transportation business is unlike any other, in that in addition to suitable terminal facilities it is necessary in transporting long distances to have established intermediate or way facilities where the cars may be unloaded and the stock fed, watered, and allowed to rest. This involves delay and considerable expense. Again, the cars used in transporting stock are not adapted to use in handling the ordinary return freight; and hence, to a very large extent, they must be returned empty, necessitating the imposition of a tariff on stock eastward approximately sufficient to compensate for the round trip of the car. The business of transporting stock eastward is entirely confined to the rail, the water routes not entering into competition for it.

On the basis of 30 cents per 100 pounds on grain to New York, about 6 mills per ton per mile, with a moderate return freight at relative rates, which is not supposed to be much, if anything, more than the service is worth, it would require, probably, \$100 to \$125 per car on stock to produce a corresponding return of profit. Formerly rates on cattle from Chicago to New York, when the roads were acting in harmony and good faith on an agreed basis, ruled as high as \$140 per car, and perhaps at times even higher. Numerous attempts were made by the competing lines to transact this business on agreed rates, but these were always thwarted sooner or later, now by only a suspicion and again by a known actual cutting or rebate in some form by one line, developed to the others by an increase in business of a competitor and diminution of

their own, or by the claims of shippers (apparently made in truth and good faith, though really without foundation) that lower rates were obtainable or had been offered them. A suspicion or a fact of this character was soon followed by "cuts" of some sort by the other lines, ending in open war, and for a time a scale of rates, by all, well known to be unremunerative; this to be followed by a new agreement that was not long in going the way of its predecessor, and with like results. During some of these contests rates ran down as low as \$30 or \$40 per car from Chicago to New York, and it was understood that for several weeks, at one time, the New York Central transported cattle from Buffalo to New York receiving absolutely nothing for its share of the through rate. This sort of business was as unsatisfactory to shippers as to the railroad companies; no shipper knew what rate his competitors were able to get; each, however, believed that he had some advantage which induced his paying high prices for stock, but it was found, in the final result of their ventures, all were generally disappointed. This condition of trade was so frequently recurring, and as the railway companies had themselves been unable by any device of theirs to prevent or remedy it, the most prominent shippers undertook to bring about an arrangement that should promise more of permanence and stability. As I understand it, a leading shipper took the initiative, and in his own way sought to ascertain what proportion of the whole business each of the Eastern trunk lines (the New York Central, Erie, and Pennsylvania Central) considered it was entitled to in a fair competition on uniform rates, and also what proportion each of the three lines from Chicago (the Michigan Central, Lake Shore and Michigan Southern, and Pittsburgh, Fort Wayne and Chicago) claimed was its due upon a similar basis. The management of the several lines were found to be not so far apart in their views on this point as to be irreconcilable, and this shipper, on behalf of himself and other shippers, his competitors, proposed to the railway companies that, in consideration of the rates being established and kept at a uniform rate, they would undertake to see to it that each of the lines should receive its due proportion of the whole movement, provided the negotiating shippers were allowed a drawback or allowance to be paid them of \$15 per car on all cattle shipped from Chicago to New York. All outside parties were to pay full rates and all were to be free to patronize that line which they preferred so long as the agreed percentages of the whole movement were secured to each line. If, however, any one of the lines failed to receive its due proportion from the voluntary choice of shippers, the negotiating parties were either to divert their own regular shipments to that line, or were to purchase stock in the market, even though it was against their judgment as to its being a profitable investment, and ship by the line that was deficient to an extent that would bring it up to its proper proportion. I do not understand that the railroad companies were expected or allowed to divert shipments from one line to another, or that there was anything in the arrangement in the nature of a pool, but that the adjustment of the agreed proportions was to be left wholly to the negotiating shippers for which they were to be paid by the companies \$15 per car, not only on what they shipped themselves, but upon the whole movement of cattle between Chicago and New York. This proposition was accepted by the companies in interest, and under it uniform rates by all the lines have been maintained since; these rates have not been the same at all times, but have under the small changes that have occurred been uniform as between the several lines. At first there were some twelve or fifteen shippers combined in this undertaking, but the smaller ones have gradually withdrawn until now there are but three of the "eveners" left; one of these ships mainly by the Michigan Central, one by the Lake Shore and Michigan Southern, and one by the Pittsburgh, Fort Wayne and Chicago. The shipments hence by the Michigan Central and Lake Shore lines are divided between the New York Central and Erie, those by the Pittsburgh, Fort Wayne and Chicago go by the Pennsylvania Central from Pittsburgh. The proportions of the business out of Chicago accorded to the several lines are, I understand, 32 per cent. to the Michigan Central, 36 per cent. to the Lake Shore, and 32 per cent. to the Pittsburgh, Fort Wayne and Chicago, with an allowance, of recent date, of 16½ per cent. of the whole to the Baltimore and Ohio, this to be drawn from the three lines previously named in the proportions of the above stated percentages of each. The Pittsburgh, Cincinnati and Saint Louis line is not recognized in this arrangement, and no stock is shipped to Eastern cities by that road from Chicago. The percentage of division between the New York Central and Erie I do not know, nor do I know in what proportion shipments are divided between the Grand Trunk of Canada, Great Western of Canada, and Canada Southern, but I believe all these share in the movement from here by the Michigan Central.

As to the effect of this arrangement on stock-raisers, I incline to the opinion that it is not in itself specially injurious, certainly it is not beneficial. At times of protracted wars in rates of transportation perhaps stock-raisers would receive a trifling advance in the selling price of their stock, as frequently, however, the freight abatement would be mainly realized by Eastern purchasers, and in turn to a small extent by consumers, again each of the above classes would realize a portion of the benefit of low rates. Very seldom, except in the incipient stages of cut rates, did it result in increased profit

to shippers, competition among themselves as buyers and sellers controlling their measure of profit, irrespective of an abatement in expenses which was more or less common to all. The final outcome of this arrangement has been to reduce competition among buyers for shipment, and sellers in the Eastern markets, and doubtless prices are maintained on a better margin of profit than if there were more shippers, and in that view of it producers have, probably, not realized quite as much for their stock, as compared with Eastern prices current, as they would have done under a fuller competition.

As to the effect of the arrangement on Western traders (by which I understand is meant buyers for shipment), it appears that it has practically driven out of the market about all the shippers except those who have an interest in the stock-yards used on the way for the unloading of cattle. The difference in profit on two shipments made under circumstances similar in other respects, the one by a party who has to pay a charge at these intermediate yards, and the other by one who yards his own cattle and also receives a profit on the stock of other shippers, is quite sufficient to give the latter a decided advantage in conducting business. The three principal cattle-shippers now are men of long experience in the trade, ample capital, and facilities in every way so far superior to novices in the business that a competition with them can only be carried on at a great disadvantage. The present arrangement being satisfactory to the railway companies, or at least so much more satisfactory than the former series of warfare, they have not been inclined to encourage anything to seriously disturb the present situation.

Eastern traders (butchers, I suppose) find much less competition among sellers, and less times when the market is overstocked, than formerly. The cattle are forwarded with reference to supply and demand, and as the principal shippers can keep reasonably well informed as to the wants of the market and the prospective supply from all sources they will not be likely to forward supplies except as they think they are needed. Whether or not this condition of regulated supply is advantageous or otherwise to Eastern buyers, of course admits of debate. The tendency of the arrangement is undoubtedly in the direction of monopoly, but I suppose there may be even worse things than an honestly and fairly conducted monopoly. If the allowance of \$15 per car applied only to the shipments actually made by the "eveners," it would seem that it might be in a measure defended as a payment for services rendered the companies, but it would be difficult to satisfy an independent shipper that a drawback on his shipments could be equitably allowed to parties not interested in his business, and still more difficult to convince him that it was right to pay a rebate on his business to his competitor.

There can be no question but that the arrangement is decidedly advantageous to the transportation companies interested; it has resulted in giving them a fair compensation for the service performed, and has removed one of the most prominent sources of irritation among them. I do not think it has had any special effect upon the interests of the Chicago provision market, or that the general provision markets of the country have to any appreciable extent been affected by it.

I have not alluded to an arrangement, somewhat similar, that exists in respect to the transportation of live hogs, the question not in any way calling for any report save on the cattle traffic. Nor have I noticed an arrangement for the division of the cattle traffic between Chicago and Boston. The nature of this latter arrangement I am not very familiar with, but presume its main points could be obtained if desired. In its general scope, I understand, it is about the same as that to New York; in it, however, the Grand Trunk Railway of Canada is an important element.

This whole question has, I believe, been investigated recently by a committee of the House of Representatives at Washington, and it is probable valuable facts may be gained from their report. It is probable that some of the testimony and statements made to that committee should be received with some allowance as coming from parties especially interested, pecuniarily, in either maintaining or destroying the manner of doing business now in operation.

This arrangement, to my mind, is such a one as there ought not to be an occasion for; its tendency, if not its object, is to destroy free competition, and that feature of it which allows a commission or drawback on the transportation charges imposed on ordinary shippers to parties who have no interest in those shipments, and who do not influence or control them in any way, seems little less than a monstrous imposition of blackmail upon innocent and perhaps generally unsuspecting parties. It is, however, perhaps true, that the railway companies' participation in this scheme was forced upon them as a matter of protection against the constant recurrence of the ruinous wars that seemed inevitable under the former system of conducting the business, and it is only another illustration of the difficulty of conducting the railway transportation business under active and powerful competition.*

* The whole system of live stock evening has recently (now June, 1879) been abolished, with the understanding that rates hereafter are to be maintained, and business to be apportioned through a commission.

Question 15. What proportion of the total cattle traffic from Chicago eastward was covered by this apportionment scheme?

Answer. I understand the arrangement covered all cattle shipped from this city to New York, and that a similar one, at least in most respects, covered all cattle shipped hence to Boston.

Question 16. To what seaboard cities and to what interior points did this apportionment scheme apply?

Answer. The one to which I have alluded at length applied only between Chicago and New York. There was, as already intimated, a somewhat similar arrangement in respect to the cattle trade between Chicago and Boston, and also, as I understand, a similar one between East Saint Louis and some of the Eastern cities; the details of this latter, however, I have no knowledge of.

Question 17. Has the compact known as "evening up" any legal existence, or is it merely an informal agreement between various roads and dealers known as "eveners"; a compact the conditions of which cannot be enforced at law as against any one of the parties to it?

Question 18. Please to transmit with your reply to the last question any expressions of legal opinion, judicial or otherwise, which may have come to your notice, and are believed to be of value, touching the policy of the compact known as "evening up" in so far as it affects the commercial interests of Chicago or the interests of the producers at the West, or of the consumers of Western products at the East.

Answer to 17 and 18. I do not understand that any of the railroad combinations or competitive agreements are reduced to writing and formally executed as contracts in the strictest sense of that term, but are rather verbal agreements. These evening schemes are, I suppose, in the nature of verbal contracts, and I do not know of any reason why they could not be enforced in law when their terms are admitted or proven, except that in passing upon such a contract the courts might deem it as against public policy, and for that reason declare it void. I am not aware that it has ever been the subject of judicial inquiry, nor have I observed any published expressions of opinion in respect to it that ought to be considered as of much value. It is probable that it has been the subject of editorial comment by the newspaper press, but I do not call to mind having seen any discussion of it that had the appearance of having been written with a full understanding of its cause and nature.

Question 19. Please to present a statement in regard to any discriminations in rates which have operated prejudicial to the interests of Chicago during the past year, and state the circumstances under which the roads have made such discriminations.

Answer. I do not know of any serious discriminations that have been made against Chicago during the past two years (1877 and 1878) except such as have been made on the north by the Detroit and Milwaukee Railway in favor of Milwaukee, and by the roads crossing or partly crossing the State of Illinois south of Chicago, and their connections. The first of these has resulted in diverting some property through Milwaukee that on even rates eastward from the two cities would have come here; this, however, has not been felt as very serious to the commercial interests of the city, but is annoying to the competitive railway lines most interested. The diversion by the southern roads has been more marked and its influence has extended throughout Central Illinois, Missouri, Kansas, Iowa, Nebraska, and portions of Minnesota. The lines engaged in this diversion, by cutting agreed through rates, are nearly all in the hands of receivers, and it is claimed by the solvent companies that it has been impossible to make any arrangement with them that would not be violated or evaded, and these lines have seemed disposed to make any rate that would command the business even though it went by a circuitous route. It would seem almost established that in order to make the rates that have at times prevailed, the Eastern trunk lines must have made concessions from the rates they have claimed to charge; but this is denied. If this has not been so, the Western roads must have been doing business on very unremunerative rates, as it is stated, on what seems reliable authority, that grain has been shipped to a very large extent to New York from points on the Missouri River north of Saint Joseph at rates little if anything above those charged by the trunk lines from this city; a cut of nearly the whole of the charge from those points to this city, a route in most cases as direct, and in some more so. The most persistent violator of agreements, as is alleged, is Mr. Hopkins, receiver of the Toledo, Peoria and Warsaw and manager of the Wabash Railway Company. These lines connect at various points with roads extending or connecting with other roads in such a way as to reach all points to the west and northwest of themselves. Most of these roads can only secure through business by cutting rates established via Chicago, and it would seem that Mr. Hopkins must allow these roads more than they can get by delivering their freight to Chicago roads, in order to secure the transportation over the whole length of his principal line. Some of the Iowa roads by connecting with the Wabash are able to secure a longer haul than they could secure by delivering to Chicago roads which cross their line further north. The principal lines engaged in this diversion, aside from those under Mr. Hopkins's direct control, are the Hannibal

and Saint Joseph, the Central of Iowa, and the Kansas City, Saint Joseph and Council Bluffs roads, together with several others that contribute to it to a greater or less extent. The roads terminating at Chicago have not been inclined to meet this competition on a losing basis. It is believed that the Lake Shore and Michigan Southern and the Canada Southern and their eastern connection have to a greater or less extent shared in this cut on the business they have received from the Wabash at Toledo, but it is impossible for the general public to get reliable information on this point.

Question 20. Please to state any facts of interest pointing to the diversion of the trade of the Northwestern States from Chicago and direct to Atlantic seaports or to interior points in the Atlantic States, and state over what roads and in consequence of what differences in rates such shipments have been made.

Answer. This question is pretty fully answered in the last. Of course in the shipments there referred to similar abatements have been made to any point east of Toledo. In addition to the instances noted in the answer to interrogatory 19, there may be noted the abatement in through rates as compared with the combined rates to and from Chicago that has for several years been granted on shipments of flour and grain, especially flour, from points in Minnesota at which there is competition via Duluth. It is claimed that in order to secure the transportation of such property via Chicago a rate must be made equivalent to that prevailing via the shorter rail line to Duluth and thence by water to Buffalo; the lake freight being usually about the same from either Duluth or Chicago. This, however, has not been seriously complained of by the business interests of Chicago.

Question 21. How do the merchants of Chicago generally regard the operations of the pooling or apportionment scheme for maintaining rates and dividing traffic from New York to points in the West?

Answer. I have not heard of complaints as to any injury done to the merchants or the commercial interests of Chicago by the present apportionment of west-bound freights. I think Chicago goods as a rule are sent by that line which the shipper or consignee prefers, and that if it be necessary to divert goods to establish the agreed proportions between roads, that is done on goods passing to points further west and delivered here to the proper connecting road. Of this, however, I am not certain. Whatever of dissatisfaction has arisen in respect to diversions under this arrangement has, I think, come from points west and southwest not reached directly via Chicago. Almost any arrangement that has the effect to hold freight rates uniform, if not unreasonably high, is more satisfactory to our merchants than a system of bidding for business at cut rates which leaves each one in ignorance of the rate his competitor is getting, and tends to unsettle all business transactions and calculations. What they most desire are reasonable uniform rates. Previous to the present apportionment scheme on west-bound freights some merchants had contracts running for several months at exceedingly low rates, but I think these have all expired now.

Question 22.* How do the merchants of Chicago regard the combination which has been formed during the last three months for the purpose of maintaining rates and dividing east-bound traffic from the West to the Atlantic seaboard?

Answer. This arrangement has only been in practical operation since April 1, if, indeed, it may be said to be fully inaugurated yet. Several of the roads had contracts outstanding at irregular rates for freight to be delivered them by April 1, and to meet these a full inauguration of the "evening up" was suspended till April 1. Since then the roads have not been taking freight on the agreed apportionment, but whether this is yet to be made up I am not advised. The percentages under this arrangement are 32 per cent. to the Michigan Central, 27 per cent. to the Lake Shore and Michigan Southern, 24 per cent. to the Pittsburgh, Fort Wayne and Chicago, 7 per cent. to the Pittsburgh, Cincinnati, and Saint Louis, and 10 per cent. to the Baltimore and Ohio. Since April 1 neither the Michigan Central nor Baltimore and Ohio appear to have been getting their percentage of the movement from this city. Whether or not there has been a diversion to offset surplus movements by the Michigan Central previous to April 1, I am not able to say. I am quite sure the Baltimore and Ohio had not previous to April 1 been moving 10 per cent. of the whole, so I cannot account for the present condition of the business of each of the lines. The conditions of the eastward movement are materially different from those westward. Shippers who desire their property delivered at one point in New York do not want it diverted to another; those shipping or proposing to ship by the New York Central do not wish their property delivered at the Erie or Pennsylvania Central wharves, and vice versa. The arrangement has not yet been in operation sufficiently long to test either its merits or defects. It is, however, generally predicted that it cannot long survive the various complications that are likely to arise. I think our shippers would prefer a well-organized pool, leaving them to their own preferences as to the line they shall patronize. This "evening," unlike the cattle arrangement, is to be done by the companies through a commissioner.

* This question was answered in May, 1878.

Question 23. What was the estimated number of tons and the estimated value thereof exported from Chicago directly to foreign ports during the years 1877 and 1878?

Answer. There was exported direct from Chicago to Europe on through bills of lading issued in Chicago, during 1877, 309,185 tons; estimated value, \$31,500,000. Probably one-fifth to one-quarter more was shipped from Chicago direct to Europe which was consigned to parties at the seaboard cities, who made freight arrangements thence to Europe at the seaboard. One of our largest packers, who packs almost exclusively for the European market, has his own agent in New York, and takes no through bills in this city. There was also exported to Canada from Chicago, in 1877, 167,440 tons; estimated value, \$4,400,000. There was exported from Chicago to Europe on through bills of lading, issued in Chicago during 1878, 602,018 tons of flour, grain, provisions, and other commodities, mainly agricultural products in some form, the estimated value of which was \$35,600,000, and probably from one-quarter to one-third more that went forward to a subconsignee at the seaboard, and for which ocean freight was arranged there. There was also exported to Canada from Chicago during 1878 about 190,000 tons of produce, valued at \$3,206,261. A large proportion of the shipments to Canada was of grain, at least a portion of which doubtless found its way ultimately to Europe.

Question 24. Please to present the facts showing the published rail rates between Chicago and Boston, New York, Philadelphia, and Baltimore, respectively, since January 1, 1877, on both east-bound and west-bound traffic, and describe the departures which have been made from such published rates.

Answer. In respect to the west-bound traffic I have no data from which such a statement could be compiled, and have been unable to get a single published tariff on west-bound freight during the period named. Substantially, all west-bound freight is arranged for at the East, and I am not able to satisfactorily answer this branch of the inquiry from any information I can get from the agents of the lines in this city. In a general way, I think the established rates from New York, Philadelphia, and Baltimore, during 1877, were pretty well maintained after the establishment of the apportionment arrangement of which Mr. Fink has charge; the exceptions being generally on account of contracts extending for some time subsequent to the time that arrangement went into effect. From Boston there was more difficulty and irregularity, growing out of the competition of the Grand Trunk Railway. This, however, is supposed to be adjusted now, but as that line is somewhat of an unruly member, no great amount of permanence can be counted upon. Mr. Fink can, I suppose, give a better statement in regard to west-bound traffic than any other person.

In regard to the east-bound traffic, the statement below (printed) shows the published rates during 1877 on fourth class and several specials. These rates cover the most of the eastward movement from Chicago; the higher classes form so small a portion of the east-bound traffic that freight rates on those are but little discussed. The rates given below were pretty closely adhered to throughout the year on Chicago shipments.

All-rail freights eastward from Chicago during the year 1877.

Freights.	Dates.									
	January 1 to April 2.	April 2 to April 9.	April 9 to April 23.	April 23 to May 1.	May 1 to July 2.	July 2 to September 4.	September 4 to October 17.	October 17 to October 22.	October 22 to December 31.	
To New York:	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
Flour, per barrel	70	60	60	60	60	60	70	80	80	80
Grain, per 100 pounds	35	30	30	30	30	30	35	40	40	40
Bulk meats, per 100 pounds	45	40	40	50	50	40	50	45	45	50
Fourth class, per 100 pounds	40	35	35	35	40	35	35	40	40	40
Seeds, per 100 pounds	50	45	45	45	50	45	45	50	50	50
Dressed hogs, per 100 pounds	65	65	65	65				70	75	75
To Boston and Portland:										
Flour, per barrel	80	70	70	70	70	70	80	90	90	90
Grain, per 100 pounds	40	35	35	35	35	35	40	45	45	45
Bulk meats, per 100 pounds	50	45	45	55	55	45	55	50	55	55
Fourth class, per 100 pounds	45	40	40	40	45	40	40	45	45	45
Seeds, per 100 pounds	55	50	50	50	55	50	50	55	55	55
Dressed hogs, per 100 pounds	70	70	70	70				75	80	80
To Philadelphia and Harrisburg:										
Flour, per barrel	63	54	56	56	56	56	66	76	76	76
Grain, per 100 pounds	31½	27	28	28	28	28	33	38	38	38
Bulk meats, per 100 pounds	41	36½	38	48	48	38	38	43	48	48
Fourth class, per 100 pounds	36	31½	33	33	38	33	33	38	38	38
To Baltimore and Washington:										
Flour, per barrel	61	52	54	54	54	54	64	74	74	74
Grain, per 100 pounds	30½	26	27	27	27	27	32	37	37	37
Bulk meats, per 100 pounds	40	35½	37	47	47	37	37	42	47	47
Fourth class, per 100 pounds	35	30½	32	32	37	32	32	37	37	37
To Buffalo and Suspension Bridge:										
Flour, per barrel	40	40	40	40	40	40	40	45	45	45
Grain, per 100 pounds	20	20	20	20	20	20	20	22½	22½	22½
Bulk meats, per 100 pounds	25	25	25	27½	27½	22½	22½	25	25	25
Fourth class, per 100 pounds	22½	22½	22½	22½	22½	20	20	22½	22½	22½
To Pittsburgh, Steubenville, and Wheeling:										
Flour, per barrel	40	40	40	40	40	40	40	45	45	45
Grain, per 100 pounds	20	20	20	20	20	20	20	22½	22½	22½
Bulk meats, per 100 pounds	25	25	25	27½	27½	22½	22½	25	25	25
Fourth class, per 100 pounds	22½	22½	22½	22½	22½	20	20	22½	22½	22½

NOTE.—January 1 to April 23 boxed meats were taken to seaboard points at same rates as fourth class; from April 23 to May 1 the rate was 10 cents per 100 pounds above fourth class; from May 1 to July 2, 5 cents per 100 pounds above fourth-class rates was charged; from July 2 to October 22 the rates were the same, and for the remainder of the year it was 5 cents per 100 pounds higher on boxed meats than on fourth class.

The following were the published rates during the year 1878:

All-rail freights eastward from Chicago during the year 1878.

Freights.	Dates.							
	January 1 to March 11.	March 11 to April 1.	April 1 to May 17.	May 17 to August 5.	August 5 to August 17.	August 17 to September 2.	September 2 to November 25.	November 25 to December 31.
To New York :	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
Flour, per barrel.....	80	80	50	40	50	60	60	70
Grain, per 100 pounds.....	40	30	25	20	25	30	30	35
Boxed meats, per 100 pounds.....	45	30	30	20	30	30	35	40
Seeds, per 100 pounds.....	50	40	40	25	30	30	35	40
Fourth class, per 100 pounds.....	40	30	30	25	30	30	35	40
To Boston and Portland :								
Flour, per barrel.....	90	70	60	50	60	70	70	80
Grain, per 100 pounds.....	45	35	30	25	30	35	35	40
Boxed meats, per 100 pounds.....	50	35	35	25	35	35	40	45
Seeds, per 100 pounds.....	55	45	45	30	35	35	40	45
Fourth class, per 100 pounds.....	45	35	35	30	35	35	40	45
To Philadelphia and Harrisburg :								
Flour, per barrel.....	76	56	46	36	46	56	56	66
Grain, per 100 pounds.....	38	28	23	18	23	28	28	33
Boxed meats, per 100 pounds.....	43	28	28	18	28	28	33	38
Seeds, per 100 pounds.....	48	38	38	23	28	28	33	38
Fourth class, per 100 pounds.....	38	28	28	23	28	28	33	38
To Baltimore and Washington :								
Flour, per barrel.....	74	54	44	34	44	54	54	64
Grain, per 100 pounds.....	37	27	22	17	22	27	27	32
Boxed meats, per 100 pounds.....	42	27	27	17	27	27	32	37
Seeds, per 100 pounds.....	47	37	37	22	27	27	32	37
Fourth class, per 100 pounds.....	37	27	27	22	27	27	32	37
To Buffalo and Suspension Bridge :								
Flour, per barrel.....	45	36	36	32	32	32	36	40
Grain, per 100 pounds.....	22½	18	18	16	16	16	18	20
Boxed meat, per 100 pounds.....	25	18	18	16	16	16	20	22½
Fourth class, per 100 pounds.....	22½	18	18	16	16	16	20	22½
To Pittsburgh, Steubenville, and Bellaire :								
Flour, per barrel.....	45	36	36	32	32	32	36	40
Grain, per 100 pounds.....	22½	18	18	16	16	16	18	20
Boxed meats, per 100 pounds.....	25	18	18	16	16	16	20	22½
Fourth class, per 100 pounds.....	22½	18	18	16	16	16	20	22½

The above is the nominal or established tariff rates for the time named, but previous to August 5 very little regard was paid to agreed rates, and cutting was the rule to a considerable extent.

Question 25. Is it your opinion that the trunk lines from Chicago to the seaboard exercise a greater or less degree of control over freight rates than they did two years ago; in other words, has the power of the roads to maintain combinations been decreased by new elements of competition which have sprung up within the period mentioned?

Answer. There has been no increase in the elements of competition on east-bound business within the time named. I think there is a growing disposition to combine the various elements of competition by rail and bring about more of harmony in action looking to the maintenance of remunerative rates. The experience of 1876 led the trunk lines to this view, rather than continue the ruinous rates that prevailed during the most of 1876. This disposition is especially manifest in the adoption of the various pool and apportionment schemes, and further in the attempt, early in 1878, which, however, proved unsuccessful, to form some kind of an apportionment or co-operative arrangement with the principal propeller lines on the lakes. I think the railway lines

exercise to-day decidedly less control of both the east and the west bound traffic than they did in 1876. The reduction of tolls on the Erie Canal, covering the business of the last three years, has enabled that route and its lake connections to offer rates both ways that it is believed the rail lines cannot, without positive loss, compete with. As illustrating the fact that the water-route seems recovering from its great depression of 1876, it may be stated that of a total shipment of grain from Chicago in 1876 of 75,384,535 bushels there were shipped by lake 40,078,335 bushels, or only 53½ per cent. In 1877, out of a total shipment of 79,535,704 bushels, 57,054,936 bushels, or 71½ per cent., went by lake; in 1878 the total shipments were 106,167,089, of which 67,887,719, or nearly 64 per cent., went by lake. The Erie Canal shipments from Buffalo have risen from 27,868,835 bushels in 1876 to 44,287,039 in 1877, and 58,801,617 in 1878. Without further discussing this question in this place, I beg to refer you to the remarks in relation to it on pages 18 to 20 in my report for 1877, to the Board of Trade, Chicago.

Question 26. Have the railroads leading to the East from Chicago yet adopted any practical method for restraining the discretionary power exercised by their freight agents in cutting rates or in making special rates from Chicago to Eastern points?

Answer. The apportionment arrangement of distributing to the several lines an agreed percentage of the business on a uniform basis of rates, which has been attempted at several times, was in part intended to render the cutting of rates and the fierce competition to secure freights both unnecessary and unprofitable, and it would seem that, as the scheme is understood, it is well calculated to accomplish that end; but it is patent to all observers that efforts at securing freights are about as active as heretofore, and the subagents about as numerous; while the cutting of nominal rates by soliciting agents seems to be well established. During 1877 an effort was made or claimed to have been made to reduce the number of so-called fast freight lines, but it was not carried to an extent that has sensibly eliminated the active competition of the agents of these parasites.

Question 27. Please prepare a statement showing, respectively, the total cost of moving grain from the elevators at Chicago to Liverpool via Boston, Philadelphia, New York, Baltimore, and Montreal, as stated by you in your reply to question No. 23, page 86, Appendix of Report on Internal Commerce.

Answer. The figures given below, as in the answer in the previous report alluded to, apply to wheat only. On corn the rates per bushel would be a trifle less. The freight rates on either wheat or corn on through bills of lading are adjusted on the 100 pounds and are the same for either grain, which makes the freight charge on corn 64 per cent. on the bushel (of 56 pounds) less than on wheat per bushel (of 60 pounds). On a combined rate of freight it would be somewhat different. Freight to the seaboard either by rail or water are higher per bushel on wheat than on corn, but the ocean freights are frequently, perhaps generally, the same per bushel on both; steamer (ocean) freights are usually made on the bushel from American ports; by sail they are made on the quarter of 480 pounds, which of course makes sail freights per bushel higher on wheat than on corn. Local charges at Chicago are the same per bushel on all grains. Insurance would, of course, be less on corn than on wheat.

All the rates given below apply to the first day of May, 1878; a given date is selected for all in order to make an intelligent comparison. It may be proper to state that the date named shows a comparison less favorable to the water-route to the seaboard than if it had been made a few days earlier, as the water rates were strong (both lake and canal) on the date given, while the through rate by rail is based on a cut of about 5 cents per 100 pounds from the nominal tariff to the seaboard; all the rates given are the lowest that could be obtained by the respective modes of shipping on the date named.

Rates of charges on a bushel of wheat from store in Chicago to Liverpool, England (not including any charges at Liverpool), on May 1, 1878, by various modes of transport.

	Cents per bushel.
First. Via Boston, all rail from Chicago:	
Storage, 1½ cents; switching, trimming, and inspection, ¼ cent.....	2.12
Railroad freight, 25 cents per 100 pounds.....	15.00
Shortage, say 1 per cent. on \$1.10 value per bushel.....	1.10
Charges in Boston when not on through bill.....	1.25
Ocean freight (steam), 7 pence per bushel, say.....	14.00
Marine insurance, ½ of 1 per cent.....	.50
Primage (included in freight), sea damage not covered by insurance.....	.25
Total in cents per bushel, Chicago to Liverpool.....	<u>34.22</u>

	Cents per bushel.
Second. Via Boston, lake and rail from Chicago:	
Storage, 1½ cents; inspection, and marine insurance (lake), ½ cent	1.58
Freight to Boston, lake and rail from Buffalo	14.00
Shortage, say 1 per cent. on \$1.10 value per bushel	1.10
Charges in Boston when not on through bill	1.25
Ocean freight (steam), insurance and damage as above	14.75
Total in cents per bushel, Chicago to Liverpool	32.68
Third. Via Boston, on through bill lading, all rail to Boston, thence by steam:	
Storage, switching, trimming, and inspection	2.12
Through freight to Liverpool, 46½ cents per 100 pounds	27.90
Ocean insurance and damage .....	.75
Shortage, 1 per cent. on \$1.10 value per bushel	1.10
Total in cents per bushel, Chicago to Liverpool	31.87
Fourth. Via Boston, on through bill lading, lake to Buffalo, rail to Boston, and thence steam:	
Storage, inspection, and marine insurance (lake)	1.58
Through freight to Liverpool, 48½ cents per 100 pounds	29.00
Ocean insurance and damage .....	.75
Shortage, 1 per cent. on \$1.10 value per bushel	1.10
Total in cents per bushel, Chicago to Liverpool	32.43
Fifth. Via Philadelphia, all rail from Chicago:	
Storage, switching, trimming, and inspection	2.12
Railroad freight, 18 cents per 100 pounds	10.80
Charges in Philadelphia when not on through bill .....	.50
Ocean freight (steam), 8 pence per bushel, say	16.00
Marine insurance, ¾ of 1 per cent .....	.50
Sea damage, 25 cents; shortage, \$1.10	1.35
Total in cents per bushel, Chicago to Liverpool	31.27
Sixth. Via Philadelphia, on through bill lading, all rail to Philadelphia, thence by steam:	
Storage, switching, trimming, and inspection	2.12
Through freight to Liverpool, 48 cents per 100 pounds	28.80
Ocean insurance, damage, and shortage	1.85
Total in cents per bushel, Chicago to Liverpool	32.77
Seventh. Via Philadelphia, on through bill lading, lake to Erie, rail to Philadelphia, and thence steam:	
Storage, inspection, and marine insurance (lake)	1.58
Through freight to Liverpool, 45 cents per 100 pounds	27.00
Ocean insurance, damage, and shortage	1.85
Total in cents per bushel, Chicago to Liverpool	30.43
Eighth. Via New York, all rail from Chicago:	
Storage, switching, trimming, and inspection	2.12
Railroad freight, 20 cents per 100 pounds	12.00
Charges in New York when not on through bill	1.25
Ocean freight (steam), 8 pence per bushel, say	16.00
Marine insurance (¾), damage, and shortage	1.85
Total in cents per bushel, Chicago to Liverpool	33.22
Ninth. Via New York, lake and rail from Chicago:	
Storage, inspection, and marine insurance (lake)	1.58
Freight to New York, lake and rail from Buffalo	12.50
Charges in New York when not on through bill	1.25
Ocean freight (steam), 8 pence per bushel, say	16.00
Marine insurance, damage, and shortage	1.85
Total in cents per bushel, Chicago to Liverpool	33.18

	Cents per bushel.
Tenth. Via New York, lake and canal from Chicago:	
Storage, inspection, and marine insurance (lake).....	1.58
Freight to New York, lake from Chicago to Buffalo and by canal Buffalo to New York, through bill to New York.....	10.25
Charges in New York.....	1.25
Ocean freight (steam) 8 pence per bushel, say.....	16.00
Marine insurance and sea damage (no shortage).....	.75
Total in cents per bushel, Chicago to Liverpool.....	29.83
Eleventh. Via New York, on through bill lading (all rail):	
Storage, switching, trimming, and inspection.....	2.12
Through freight to Liverpool, 48 cents per 100 pounds.....	28.80
Ocean insurance, damage, and shortage.....	1.85
Total in cents per bushel, Chicago to Liverpool.....	32.77
Twelfth. Via New York, on through bill lading, lake and rail:	
Storage, inspection, and marine insurance (lake).....	1.58
Through freight to Liverpool, 48 cents per 100 pounds.....	28.80
Ocean insurance, damage, and shortage.....	1.85
Total in cents per bushel, Chicago to Liverpool.....	32.23
Thirteenth. Via Baltimore, rail to Baltimore and thence steam:	
Storage, switching, trimming, and inspection.....	2.12
Freight to Baltimore, 17 cents per 100 pounds.....	10.20
Charges in Baltimore when not on through bill.....	.50
Ocean freight (steam), 9 pence per bushel, say.....	18.00
Ocean insurance ($\frac{1}{2}$), damage, and shortage.....	2.02
Total in cents per bushel, Chicago to Liverpool.....	32.84
Fourteenth. Via Baltimore, rail from Chicago on through bill lading:	
Storage, switching, trimming, and inspection.....	2.12
Through freight to Liverpool, 48 cents per 100 pounds.....	28.80
Ocean insurance, damage, and shortage.....	2.02
Total in cents per bushel, Chicago to Liverpool.....	32.94
NOTE.—Very little effort is made to secure through consignments via Baltimore.	
Fifteenth. Via Montreal, rail to Montreal and thence by steam:	
Storage, "switching, trimming, and inspection.....	2.12
Freight to Montreal, 25 cents per 100 pounds.....	15.00
Charges in Montreal (if from rail).....	2.25
Ocean freight (steam), 6s. per quarter of 480 pounds.....	18.00
Ocean insurance ($\frac{1}{2}$), damage, and shortage.....	2.35
Total in cents per bushel, Chicago to Liverpool.....	39.72
Sixteenth. Via Montreal, lake to Kingston, barge to Montreal, and thence by steam:	
Storage, inspection, and insurance, to Montreal.....	1.87
Freight through to Montreal.....	9.75
Montreal charges.....	.75
Ocean freight (steam), 6s. per quarter of 480 pounds.....	18.00
Ocean insurance and damage (no shortage).....	1.25
Total in cents per bushel, Chicago to Liverpool.....	31.62

No effort is now being made to secure through freights of grain to Liverpool, via rail to Montreal.

At the present time (May 1, 1878), sail rates on the ocean are higher than steam rates. It is very rare that property is shipped from Chicago to Liverpool to go by sail on the ocean. Considerable quantities are at times shipped to go by sail to Cork for orders.

*Early in August, 1878, the charge for switching and trimming grain loaded from elevator to cars at Chicago, amounting to $\frac{1}{2}$ of 1 cent per bushel, was abolished.

Question 23. In what manner have the Iowa railroad-tariff laws operated, favorably or prejudicially, to the commercial interests of Chicago?

Answer. These laws (now repealed) have not had any very marked effect on the interests or business of Chicago. Certainly they have not in any way been advantageous to those interests. Some of the railroad lines terminating in Chicago and extending across Illinois and Iowa claim that the operation of these laws has placed them at a disadvantage in the competition of roads terminating at the borders of the State and there connecting with lines in other States, these lines by making a through rate being enabled to evade the provisions of the law. It is not, however, believed that these evasions have had any serious effect in diverting business from Chicago. That the laws referred to have operated to the injury of the people of Iowa and embarrassing to the railway lines of that State, whether purely local or extending into other States, is pretty generally admitted, and this fact being accepted, resulted in their repeal during the winter of 1877-78.

Question 29. Please to present a statement describing the manner in which the rates on east-bound traffic are influenced or controlled by the value of the commodities transported and by the state of principal markets of the world at different times, and please to present, if possible, one or two clear illustrations of your statements upon these points.

Answer. Assuming that this question relates solely to the varying value of the same commodity at different times, I will say in a general way that I do not think the value of commodities, except when they are at a point so low as to be about or fully down to the cost of production, has much to do with their movement. As a general thing producers sell their stocks from year to year, whatever the price may be, of course some years selling much closer than others, depending on their necessities and the prospect of growing crops. It is true that among the farming community there are exceptional cases where the bulk of the product is held over for better prices, but these cases are so few that they do not affect the general rule. I think it is undoubtedly true that transportation rates are more governed by the movement than the movement is governed by the rates. The different seasons of the year, state of the weather and of country roads have much to do with farmers' deliveries, and farmers are sometimes unable to market their property at times when they would be glad to do so if it were possible. Hence in the movement of wheat we find usually free deliveries in the few weeks succeeding its being harvested. This comes partly from the necessity of realizing the money for it and partly from the fact that there is some leisure then that can be given to marketing it, and the roads are then usually good. This rush of wheat at that time almost always produces more or less of an advance in freights, and frequently tends to depress prices unnecessarily. It is, no doubt, true that farmers who know they must realize before winter try to get their wheat off as soon as possible in order to realize the then current rate of freight, in anticipation of an advance, with the idea that any advance in freights will be likely to reduce the price correspondingly. This, however, by no means follows from necessity, and sometimes is not realized.

The statement below shows the movement of wheat eastward from Chicago by rail during the first three months of each of the years 1873, 1874, 1875, 1876, 1877, and 1878; the range of prices for No. 2 Chicago spring wheat (the standard grade) in Chicago and New York, and the rate of freight by all rail on wheat from Chicago to New York during the same times; also the receipts of wheat at Chicago from January 1 to July 31 in each of the several years named; this latter tending to show the amount, relatively and approximately, of the supply to draw from during each of these years. The first three months of each year is selected for this exhibit, because at that time the rail had a monopoly of east-bound transportation.

Statement showing the eastward movement of wheat by rail from Chicago for each of the first three months in 1873, '4, '5, '6, '7, and '8; also the range of prices for No. 2 Chicago spring wheat in Chicago and in New York, and the rate of railroad freight on wheat from Chicago to New York during the same time; also the receipts of wheat at Chicago from January 1 to July 1 in each of the years named.

	1873.	1874.	1875.	1876.	1877.	1878.
Shipments during January, February, and March by rail eastward from Chicago	627, 045	5, 551, 634	2, 228, 498	912, 288	343, 126	4, 419, 598
Range of prices No. 2 Chicago spring, in Chicago	119½ @ 126½	114 @ 126½	83½ @ 90½	95 @ 106	121 @ 123	101 @ 112½
Range of prices No. 2 Chicago spring, in New York	162 @ 172	148 @ 166	106 @ 118	116 @ 130	133 @ 148	122 @ 136
Rail freight on wheat per bushel, Chicago to New York	39	*33 @ 86	24	27	21	15 @ 24
Receipts of wheat at Chicago, January 1 to July 31	7, 738, 150	16, 210, 067	12, 206, 732	8, 355, 710	1, 921, 017	11, 584, 302

* The freight rate in January, 1874, was 36 cents, in February and March 33 cents; the shipments in January were 2,754,879 bushels, in February 1,499,614 bushels, in March 1,297,141 bushels; prices in

Supplemental statements furnished by Mr. Charles Randolph, secretary of the Board of Trade of Chicago.

Question 1. Please to describe the class of contracts declared by the statutes of Illinois to be illegal, in contradistinction from contracts for the future delivery of property, the latter being enforced by the Board of Trade of Chicago, while the former are not.

Answer. The statutes of Illinois here referred to (Revised Statutes, 1874, chapter 38, section 130) provide that—

"Whoever contracts to have or given to himself or another the option to sell or buy at a future time any grain or other commodity, stock of any railroad or other company, or gold, or forestalls the market by spreading false rumors to influence the price of commodities therein, or corners the market, or attempts to do so in relation to any such commodities, shall be fined not less than \$10, nor more than \$1,000, or confined in the county jail not exceeding one year, or both; and all contracts made in violation of this section shall be considered gambling contracts, and shall be void."

It will be observed that this statute contemplates the contracting to buy or sell on option or (*privilege*) to deliver or call for a commodity; not an actual contract to deliver or receive; hence, this class of trading is called "privilege trading," the party purchasing such a privilege having the right under it to deliver or call for the commodity within the time named, but being under no obligation to do so. The legislature of the State of Illinois has deemed this a demoralizing and pernicious transaction, and have sought to prohibit it by penalties. It differs from an ordinary contract in which one party agrees to deliver and the other to receive a certain amount and kind of property within a given time in the future at a stipulated price, and which can be enforced both in the courts and under the rules of commercial organizations. The statute is unfortunate in the use of the word "option" instead of "privilege," because in commercial usage the term "option" has come to be applied to contracts for the actual delivery and receipt of property during a specified limited time, as "buyer's option" or "seller's option," in the one case the buyer being at liberty to call for the property at any time at his pleasure within the specified time, and in the other the seller being at liberty to deliver the property at any time, at his pleasure, during the specified time; in either case, however, if the privilege *as to time* is not previously acted on, the property *must* be delivered and received at the termination of the specified time. The use of the word "option" in testimony, and in correspondence when brought before courts in some cases, tends to confuse the court as to the real character of the transaction in view of this statute; but, as a general thing, the court has been readily able to distinguish between the two modes of trading; sustaining the one and ruling against the other.

Question 2. In speaking in regard to foreign shipments direct, you say, "Our local shippers generally prefer to consign only to the seaboard, availing themselves of either the Eastern or foreign market, as they may elect, after the arrival of the property at the seaboard." Will you please to explain to me clearly what you mean by the designation "local shippers"? I presume you mean shippers whose regular place of business is at Chicago, in contradistinction from shippers who act only as agents for parties telegraphing to them from Europe to ship to them direct.

Answer. By "local shippers" I would explain that I meant such Chicago shippers as ship on their own account, in distinction from those who ship on orders from other places; a better term would have been "Chicago merchants who ship on their own account."

Question 3. Is there any considerable amount of grain bought and sold at Chicago by Chicago merchants or on the Chicago Board of Trade which is not actually brought to Chicago but is shipped from interior points and passes to the East through Chicago or by one or more of the cut-rate lines, that is, via Milwaukee, and Detroit and Milwaukee Railroad, or via the Wabash Railroad, or any other of the lines shunning Chicago; and, if so, are you able, under your rules, to secure the evidence of actual delivery of the property, and are such shipments embraced in your statistics?

Answer. There is a very large amount of grain bought and sold on the Chicago Board of Trade which is not actually brought to Chicago but is shipped from interior points eastward, some of it passing through Chicago, but a large portion of it going East by roads south of Chicago, including, notably, shipments via Joliet Cut-off, the Wabash, Toledo, Peoria and Warsaw, Indianapolis, Bloomington and Western, and other lines; but little via the Detroit and Milwaukee line across Lake Michigan.

January (in Chicago) were \$1.14@ \$1.20, in February \$1.15@ \$1.20, in March \$1.16@ \$1.24. The receipts at Chicago were, in January, 4,031,935 bushels; in February, 2,737,569 bushels; in March, 1,700,183 bushels. I think this statement is a fair illustration of the fact that I assume, that values current have but little to do with the movement either on high or low freights; but rather, that the freight rate, irrespective of prices, is governed by the supply seeking shipment. High freights can be maintained on a free movement at low values very much more easily than on a scanty movement at even extravagantly high values. The fact is that at almost all times the capacities of the railroads are greater than the supply of property to move, and the management, except in times of senseless wars in rates, keep rates as high as they can and not seriously disturb or curtail the movement.

Such of this grain as passes through Chicago is included in my report of receipts and shipments at Chicago, but no other. I allude to this movement as being of a large but uncertain amount on page 6 of my letter of July 21, ultimo. This property is usually sold here, the purchaser giving shipping directions and paying for it on delivery to him of a bill of lading, payment in some cases being made on shipper's weights guaranteed at destination in full, but usually guaranteed into one per cent. Contracts for sales of this character are enforceable between members of the Chicago Board of Trade under the rules of the board, the same as any other contract.

Question 4. On page 2 of your report I find the following: "When the Grand Trunk Railway of Canada was completed to Portland, in 1864, that corporation began to make efforts to secure business from the Western States, and by its connections with Chicago via the Michigan Central Railroad, sought to inaugurate through shipments of *rolling freight*, no attempt being made to induce shipments of grain in bulk by that route until several years subsequently." Will you please inform me what you mean by "*rolling freights*?"

Answer. The term "*rolling freight*" is applied to such freight as is shipped in packages. The rolling freight alluded to by me as being that sought for by the Grand Trunk Railroad in the early days of direct European shipments, was mainly flour in barrels and provisions in barrels, tierces, boxes, &c.

Question 5. Will you please to inform me what free goods other than tea and coffee are imported directly by Chicago merchants in any considerable quantities?

Answer. There is no large amount of "*free goods*" aside from tea and coffee imported direct by Chicago merchants; what there is of such, so imported, comes mainly within the range of druggists' stock, and some fish from Canada.

Question 6. My inference from all that you have said to me in regard to foreign imports is that the total value of foreign goods directly imported by Chicago merchants is probably *not more than 5 per cent.* of the entire value of the imported goods actually sold at Chicago, the rest being purchased at Atlantic seaports.

Answer. In respect to the percentage of the imported goods sold in Chicago that are imported direct by Chicago merchants, I do not remember that I have made an estimate other than that I stated in my report for last year, revised for this, at page 11, that "*the amount purchased at the East no doubt largely exceeds those imported direct.*" * * * "Comparatively few of our merchants import direct, and they not nearly as much as they sell of imported goods." Marshall Field, of Field, Leiter & Co., our largest dry-goods house, says: "I have no figures to make correct estimate, but do not believe over 10 @ 12½ per cent. of foreign dry goods sold here are imported direct, and will not increase unless duties are more honestly collected than during the past three years; our importations have been falling off and our business increasing; what are not imported direct are purchased in Eastern cities." I asked a similar estimate from J. V. Farwell & Co., but have not yet received it. Mr. Field's estimate I have no doubt is fully as high as the facts will justify in respect to dry goods. In other lines I think the percentage is almost uniformly less, so that probably on the whole 5 @ 7 per cent. would be quite large enough for a general estimate, and if foreign sugar, refined in this country, be included as imported goods, the percentage would be still less. I should not be inclined to class foreign sugars refined at the East and sold in Chicago as among the sales of imported goods at Chicago.

Question 7. Please to furnish the following information in regard to the direct importation of tea and coffee at Chicago:

1st. If your imports of tea are shipped to Chicago on through bills of lading, or on direct consignment from ports in China and Japan to Chicago?

2d. Have all of such imports been through the port of San Francisco?

3d. Have the Chicago merchants imported teas from China which have been consumed at San Francisco, or at intermediate points between San Francisco and Chicago?

4th. Have your direct importations of coffee been made from the countries where produced, or in other words, have such imports of coffee been made on through bills or direct consignment from South America and the East Indies to Chicago?

Answer. The direct imports of tea at Chicago in 1878 were entirely by steamers via San Francisco; in previous years there have been some importations via Suez Canal steamer and New York, and some by sailing vessels and New York. All reported as direct importations are on through bills of lading, that is, direct consignment from ports in China or Japan, but not always on a through rate of freight. These importations of both tea and coffee are all entered at ports of first arrival, being free goods, and are not noted in the custom-house statistics at this port at all.

I understand that a limited amount of teas have been imported by Chicago merchants and distributed from San Francisco, but to what extent I am not advised; it has not, I think, been large.

The importations of coffee have been made in the same manner as those of tea; these have been made largely by one house—some via New York, some by Baltimore, and some by Gulf ports; the proportions by each I am not advised of. The direct im-

portations of both tea and coffee embrace but a small portion of the aggregate of each received in the city.

Question 8. I desire to arrive at an expression as to the relative advantages of direct trade between points west of Chicago and the city of New York, and of trade through Chicago; I refer exclusively to eastward shipments.

The direct shipments through Chicago offer the advantages of a saving of cost of transfer at Chicago, of commissions, and of warehousing there. But on the other hand are the multifarious advantages presented by the great reservoir or market at Chicago which you have stated to me. Without going into any discussion as to what these advantages are, I want to come at the resultant of all those advantages, namely, the relative state of the Chicago market, of the New York market, and of the Liverpool market. Is it not true that all those advantages which Chicago possesses as a market oftentimes constitute it a relatively better market for the sale of products than New York or Liverpool? In other words, is it not true that during a very considerable part of the year producers of grain throughout the States west of Chicago can really do better by selling their grain in the Chicago market than they could by shipping it direct to New York or to Liverpool? Or, to put the question in another form, is it not only now and then, or with respect to exceptional movements, that the direct shipment from a point west of Chicago to the Atlantic seaport, or to some point in Europe, affords better results than could be realized by the sale of the same products in the Chicago market? To follow the same question up by a third one of almost the same import, does not the whole force of the Chicago commercial enterprise compete with the tendency to ship directly through Chicago or around Chicago to some easterly point?

Answer. In respect to the relative advantages of producers west of Chicago in the one case shipping direct to New York or other seaport, and in the other, consigning their property to Chicago for sale on that market, I have this to say: The current prices of almost all grains are usually higher relatively in Chicago than in New York; that is to say, a bushel of grain shipped by a producer from a point west of Chicago will almost always net him more if shipped to Chicago for sale there, than if shipped through Chicago to New York for sale there, with a view of saving Chicago charges. To do this he must ship by all rail. As illustrating this I find that the average price of No. 2 spring wheat in Chicago during 1878, simply computing the average of daily prices without reference to quantities, was about 96.56 cents per bushel; out of this if sold on arrival there would be but 1 cent commissions. The average price of the same wheat in New York, by Mr. Walker's tables, was a shade under 113½ cents, from which would be about 2½ cents New York charges, making a difference of, say, 15½ cents. The average freight by all rail was about 16½ cents per bushel, showing about 1½ cent per bushel in favor of the Chicago shipment for that year on wheat; besides this it is admitted that there is more loss in weight, which the shipper must stand, on shipments to New York than to Chicago, and again there is a difference of about ten to twelve days in the time of getting final returns in favor of the Chicago shipment. The speculative character of the Chicago market tends to keep up prices to all they will bear as compared with other markets, and of course it is felt to be the interest of all Chicago merchants to invite as large a volume of trade to the city as is practicable.

APPENDIX No. 4.

INFORMATION FURNISHED BY J. W. MIDGLEY, Esq., RAILROAD COMMISSIONER, IN REGARD TO COMPETITION BETWEEN THE RAILROADS EXTENDING WEST FROM SAINT LOUIS AND CHICAGO AND THE VARIOUS POOLING ARRANGEMENTS WHICH HAVE BEEN ENTERED INTO BETWEEN THOSE RAILROADS, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS JULY 10, 1878.

Question 1. Please to describe the several railway lines extending from the four "Missouri River Points," viz, Kansas City, Leavenworth, Atchison, and Saint Joseph, to Saint Louis and to Chicago, stating their relations to each other.

Answer. The established railroad lines from Chicago and Saint Louis, which compete for the business originating at and passing those points, are as follows:

1. The Chicago and Alton, extending from Chicago to Mexico, Mo., 325 miles, and thence, by agreement, over the Saint Louis, Kansas City, and Northern Railway to Kansas City, 167 miles, and to Saint Joseph, Mo., 199 miles. Total distances: from Chicago to Kansas City, 492 miles; to Saint Joseph, 360.

2. The Chicago, Burlington and Quincy, from Chicago to Quincy, 263 miles, and thence, by agreement, over the Hannibal and Saint Joseph Railroad to Saint Joseph, 276 miles; to Atchison, 227 miles; and to Kansas City, 226 miles. Total distances: from Chicago to Saint Joseph, 469 miles; to Atchison, 490 miles; to Kansas City, 489 miles.

3. The Chicago, Burlington and Quincy, from Chicago via Burlington, Iowa, to Hopkins, Mo., 441 miles; thence, by agreement, over the Kansas City, Saint Joseph, and Council Bluffs Railroad to Saint Joseph, 59 miles; to Atchison, 80 miles; to East Leavenworth, 103 miles. Total distances: from Chicago to Saint Joseph, 500 miles; to Atchison, 521 miles; to East Leavenworth, 544 miles.

4. The Chicago, Rock Island and Pacific, from Chicago to Atchison, 538 miles; to Leavenworth, 529 miles. At Beverly, 5 miles east of Leavenworth, connection is made with the Kansas City, Saint Joseph, and Council Bluffs Railroad for Kansas City, 29 miles. Total distance, Chicago to Kansas City, 558 miles.

5. The Hannibal and Saint Joseph, from Hannibal to Saint Joseph, 206 miles; to Atchison, 227 miles, and to Kansas City, 226 miles.

6. The Missouri Pacific, from Saint Louis to Kansas City, 282 miles; to Leavenworth, 309 miles, and to Atchison, 330 miles.

7. The Saint Louis, Kansas City and Northern, from Saint Louis to Kansas City, 277 miles; to Saint Joseph, 309 miles.

Question 2. Please to describe, historically, and as briefly as possible, the contest which was, for a long time, carried on between the various lines extending from Saint Louis and Chicago to the Missouri River, stating the various unsuccessful attempts made to maintain rates, the causes of the failure of such attempts, the time when efforts were first made for the establishment of the scheme known as the Southwestern Rate Association, the relative proportion of freights apportioned to each city, and the results of the operation of the scheme.

Answer. For some years after the roads from Chicago and Saint Louis were completed through to the Missouri River, they agreed upon rates of freight; but, as no pledge for their maintenance was given, the rates were not adhered to. Charges of bad faith, denials, and counter-charges were of common occurrence. The inevitable rupture resulted; but not until the spring of 1876 did it become alarmingly severe. Rates then fell so low that no profit remained in the business. The disagreement was as to the relative amount of traffic which should be made tributary to the rival cities. The issue was undecided when the struggle between the eastern trunk lines threatened to involve the western roads. To avoid that calamity and restore remunerative rates, the managers came together in Saint Louis on May 4, 1876. At that meeting three important results were attained: 1. Fixed differences were agreed upon between the rates to and from Chicago and the rates to and from Saint Louis on the same articles of freight. 2. No east-bound rates were to be quoted to any point east of Saint Louis, Chicago, or Toledo, and no through rates from the seaboard were to be accepted unless they allowed the western roads their arbitraries to the Missouri River. 3. Reasonable rates to and from Missouri River points were restored. Each party agreed to

maintain this agreement; but that assurance proved insufficient. A subsequent meeting was held in Chicago. The pressing need of an organization to be directed by an officer empowered to maintain rates and punish violations of agreement, was admitted. It was not, however, until August 30, 1876, that a committee was appointed to draw up a plan of organization, which plan was unanimously adopted at a meeting of managers held in Saint Louis September 12, 1876. The organization thus formed was called the Southwestern Railroad Rate Association. The main features of the agreement were as follows: All freight business, except lumber, which passed between Chicago, Hannibal, or Saint Louis and Saint Joseph, Atchison, Leavenworth, or Kansas City to, through, or beyond any of the points named, in either direction, was embraced in the association. The manager of each road in the association constituted its board of managers. Three members comprised the executive committee. They elected a secretary, who also became secretary of the association. For convenience in establishing rates and dividing earnings, two divisions were created. The Missouri Pacific, Saint Louis, Kansas City and Northern, and Hannibal and Saint Joseph, to the extent of its business via Hannibal, and the Kansas City, Saint Joseph and Council Bluffs Railway, to the extent of its business to Saint Louis, constituted the Saint Louis division. The Chicago and Alton, Chicago, Burlington and Quincy, Chicago, Rock Island and Pacific, Hannibal and Saint Joseph, to the extent of its business via Quincy, and the Kansas City, Saint Joseph and Council Bluffs, to the extent of its business to and beyond Chicago, constituted the Chicago division. The general freight agents prepared schedules of rates of freight and submitted them to the board of managers. When approved by the latter, no deviation therefrom was allowed except by consent of the executive committee. Rates were so adjusted that the through rates between the Missouri River and the seaboard were the same via Saint Louis, Hannibal, and Chicago. The tonnage or business was divided equally between the two divisions. Each road furnished the secretary with a detailed statement, monthly, of all business embraced within the association, and that officer made the required adjustment between the two divisions; then, after deducting 50 per cent. for operating expenses, he distributed the remainder among the lines in such proportions as were from time to time agreed upon.

All special contracts previously made by the several lines were carried out; but upon their expiration no one was permitted to make any special rates. No penalty for violation of the agreement was provided, each line being put upon its honor faithfully to observe its provisions. Under this agreement the association operated for one year. All parties profited by it; yet it did not prove entirely satisfactory. It was felt that some way must be found to compel members to be honest by removing from them the temptation to be dishonest. Experience had developed certain defects in the organization. These were sought to be remedied by a new agreement, which was drawn up by the secretary. It went into effect September 1, 1877. It contained the membership, organization, and divisions of the former agreement. The only regard, however, paid to divisions was in the establishment of rates. The *gross* earnings on all *competitive* business to and from the points already described were divided. Of the gross, each road was allotted a fixed percentage, which proportions were agreed upon for one year. These were based mainly upon the business done by the several roads during the year previous. A clearing-house was created, under control of the secretary, to audit all accounts and settle balances between the parties. Payments were made promptly, as declared and advised by the secretary. No attempt was made to secure the agreed distribution by forcing traffic over a particular line. The business of the previous year had divided itself so evenly that it was believed a similar result would again be reached. Besides, there was no inducement for a line to exceed its proportion, because in such event it was required to pay over the entire excess. The secretary advised that the roads doing the excess retain 35 per cent. to pay for operating expenses, but the association decided otherwise. Five months afterward they agreed upon 30 per cent., and made it retroactive, so as to review all previous settlements under the new agreement. Any number of roads could be admitted into the association, provided unanimous consent was obtained. No cognizance of local business was taken, but its existence and the consequent maintenance of rates protected the local business and avoided discrimination against local shippers.

Question 3. About what proportion of the total tonnage transported over each one of the Saint Louis and Chicago roads during the year 1877 consisted of traffic to and from Missouri River points?

Answer.

ROADS.	Total number of tons hauled one mile.	Total number of tons hauled one mile to and from Missouri River points.
SAINT LOUIS ROADS.		
	<i>Tons.</i>	<i>Tons.</i>
Missouri Pacific	154, 693, 702	43, 227, 477
Saint Louis, Kansas City and Northern	152, 819, 739	44, 031, 504
Hannibal and Saint Joseph	80, 764, 682	45, 289, 127
Total	388, 278, 143	132, 548, 058
CHICAGO ROADS.		
Chicago and Alton	208, 947, 563	61, 389, 069
Chicago, Burlington and Quincy	667, 853, 169	84, 489, 947
Chicago, Rock Island and Pacific	337, 259, 066	51, 406, 817
Total	1, 214, 059, 800	197, 345, 853

Question 4. Did the Southwestern Railroad Rate Association, and does your present association of Chicago roads embrace the apportionment of both east-bound and west-bound traffic?

Answer. Yes.

Question 5. Regarding the traffic between Missouri River points and Chicago and Saint Louis, about what percentage of the total receipts on east-bound traffic is from first class, second class, third class, fourth class, and all other classes, respectively, and about what percentage of the receipts from west-bound traffic is from said classes respectively?

Answer. Of the gross receipts arising from west-bound traffic, the percentages were about as follows: from first class, 20 per cent.; second class, 5; third class, 10; fourth class, 20; special class, 15; and the remainder was divided between the classes A, B, and C freight, salt, coal oil, &c. Of the east-bound earnings, comparatively little were derived from first, second, and third class freights, wool being the chief article classed second and third. From fourth class, which generally includes meats, the earnings were 13 per cent.; from wheat, 1½; from other grain, 42; and from live-stock, 20 per cent.

Question 6. Was the division or apportionment under which the South-Western Rate Association worked and under which the Chicago Association worked based upon tonnage moved or upon receipts from traffic?

Answer. The gross earnings, computed at the rates established for the respective divisions in which the freight was carried, were divided upon the agreed percentages to each line.

Question 7. Please to present the average rates charged by the Saint Louis Roads and by the Chicago Roads of the South-Western Rate Association from the time of its formation until the time of its disruption.

Answer. The west-bound rates, except on salt and coal oil, were unchanged during the entire existence of the association, and are now as then.

	1	2	3	4	Special.	A	B	C
From Chicago to Missouri River points	<i>Cents.</i> 85	<i>Cents.</i> 70	<i>Cents.</i> 45	<i>Cents.</i> 30	<i>Cents.</i> 25	<i>Dolla.</i> 75	<i>Dolla.</i> 60	<i>Dolla.</i> 40
From Saint Louis and Hannibal points	65	50	35	25	20	50	40	30

East-bound rates on first, second, and third classes have likewise remained unchanged at 60, 45, and 30 cents per 100 pounds, respectively, to Saint Louis, and 75, 60, and 45 cents per 100 pounds to Chicago. In January last fourth-class rates were reduced 5 cents per 100, making them, as at present, 20 cents to Saint Louis and 25 cents to Chicago. Grain rates have fluctuated more, the maximum being on wheat to Saint Louis 25 cents and to Chicago 30 cents, and on other grain to Saint Louis 20 cents, to Chicago 25 cents. The latter were the average rates. In January last, however, the rates were reduced as follows: On wheat to Saint Louis, 20 cents; to Chicago, 25 cents; and on grain to Saint Louis, 15 cents; to Chicago, 25 cents. Live-stock rates remained

at \$50 per car to Saint Louis and \$67.50 to Chicago, except during two months in the summer of 1877, when the rates were made \$70 to Chicago.

Question 8. How did the rates, during the continuance of the South-Western Rate Association, between Saint Louis and Missouri River points and between Chicago and Missouri River points, compare with the proportion of through rates which those roads received on shipments between the Atlantic seaboard and Missouri River points or points beyond the Missouri River; also, how did the two rates compare during the war of rates which prevailed in April, 1878?

Answer. The Chicago lines applied their local rates as arbitraries on seaboard business. The through rates were obtained by adding to those locals the trunk-line charges between New York and Chicago. Equal rates were then made via Saint Louis, but, generally, a reduction in the rates between Saint Louis and the Missouri River had to be made in order to make the through rates the same as they were via Chicago. The extent of these reductions may be shown by a comparison of the last agreed rates from Saint Louis and Hannibal, which applied on business from the seaboard and on local business respectively: On business from the seaboard, rates per 100 pounds, from Saint Louis to Missouri River points, first class, 64 cents; second class, 50 cents; third class, 29 cents; fourth class, 16 cents; special class, 11 cents. On local business, first class, 65 cents; second class, 50 cents; third class, 35 cents; fourth class, 25 cents; special class, 20 cents.

Question 9. Please to state the circumstances which led to the very large increase of traffic to Saint Louis during the last two months of the existence of the association.

Answer. About 70 per cent. of the gross tonnage carried eastward from Missouri River points consists of grain. During last winter the movement of grain via the Mississippi to foreign ports assumed such magnitude, and the rates by river to New Orleans and thence to Liverpool were so much lower than could be secured via New York, that movement in the latter direction practically ceased. Grain commanded higher prices in Saint Louis than in Chicago, and that anomalous condition continued till the opening of lake navigation. Still another barrier against shipments to Chicago lay in the fact that the rates to the latter city were stubbornly maintained 4 to 6 cents per hundred above the rates to Saint Louis, despite the relative condition of the markets. As a natural consequence all the grain went to Saint Louis.

Question 10. What was the immediate cause of the disruption of the apportionment scheme?

Answer. The cause alleged was the refusal of the Chicago roads to agree to a readjustment of the percentages of business based on the amount done by the several roads during the three months ending November 30, 1877. The percentages had been agreed upon for one year from September 1, 1877. They were based on the results of the first year's business, and at that time were considered satisfactory. But the remarkable diversion of grain by river to New Orleans and the exclusion of Chicago as a competitor for that traffic led to the belief that Saint Louis would thereafter control the grain traffic of Kansas and Nebraska. Throughout the winter months grain commanded 2 and 3 cents per bushel more in Saint Louis than in Chicago; yet the rates to Chicago were kept 4 cents per 100 above the rates to Saint Louis. Eventually the Chicago members asked that, while the markets continued against them, the rates of freight be made no higher to Chicago than to Saint Louis. They urged that, as corn was destined to Europe, it was strictly competitive. But the Saint Louis gentlemen would not consent that grain should be carried 500 miles to Chicago for the same price that it was carried 300 miles to Saint Louis. The same position was taken with regard to meats destined for New York. Hence the Chicago roads were debarred from doing business, and had little to do but remain quiet and receive from the Saint Louis roads the revenue derived from the tonnage carried in excess of the agreed proportions. This the Saint Louis roads continued to pay with a promptitude and degree of honor unparalleled in railroad annals; but when, within six months, the payments had exceeded \$150,000, it was felt to be burdensome, and, to escape further obligations, notices of withdrawal were given. These were carried into effect March 14, 1878.

Question 11. Please to state, as clearly as possible, the manner in which and the extent to which the arrangements entered into or proposed to be entered into between the roads forming the South-Western Rate Association were affected by the competition of the Toledo and Wabash Road and its connecting line, the Hannibal and Saint Joseph Railroad. In this connection please to state, as clearly as you may be able, the advantages possessed by the Wabash Railroad on account of its location and its eastern connections by water and by rail.

Answer. When the rate association was formed, the intention was to apply arbitrary rates on all business interchanged with other roads. Such action the managers of the Wabash declared would exclude them from the Missouri River territory. To that they would not submit; and, if denied their share of business, would make such rates as would secure it; and, by disturbing those of the association, would endanger its existence. This threat they carried into effect, when the association, early in 1877, withdrew the rates from Missouri River points to Toledo, and resolved to apply arbitraries

on all business delivered to connecting roads. The managers of the Hannibal and Saint Joseph had repeatedly said they could not demand arbitrary rates from the Wabash; that Toledo was their natural market, and that, unless they were permitted to make through rates to Toledo, they must consider the expediency of withdrawing from the association. For several weeks after the withdrawal of Toledo rates no business was done via Hannibal. That experience inclined the Hannibal Road to listen to the seductions of the Wabash, and to join in a movement which, by reason of "cut" rates, secured to the outlet via Hannibal and the Wabash more grain than was carried by the six other routes in the association combined. As one-half only of the agreed rates were divided, a road could, in consideration of securing a large movement of freight, afford to divide one-half the established rate, and, from the remainder, accept their proportion of a "cut" made in connection with another road. Such action would be dishonest, but the subsequent agreement to divide gross earnings was intended to remove the temptation.

Question 12. Please to mention any other rail lines which exert or have exerted a disturbing influence upon the arrangements which the South-Western Rate Association desired or might have desired to enter into?

Answer. The Missouri, Kansas and Texas Railway proved a disturbing element. From Hannibal, where the road connects with the Wabash Railway, it runs southwesterly via Fort Scott to Parsons, Kansas, whence a branch diverges northwesterly to Junction City, Kansas. This branch intersects four of the principal roads tributary to Kansas City. The latter complained that the Missouri, Kansas and Texas made nearly the same rates from junction points to the East as were made by the associated roads from Kansas City; and that, as the Kansas roads were charged local rates by the association, they had to abandon the business at common points to the Missouri, Kansas and Texas. Thereupon the association, in order to secure a legitimate share via Kansas City, agreed to so reduce their rates as to enable the complaining roads to meet the competition of the Missouri, Kansas and Texas. This action the latter regarded as an intrusion upon its territory; and when, some weeks later, the association joined with the Saint Louis and Iron Mountain and the New Orleans and Chicago roads in forming routes to the Gulf, the Missouri, Kansas and Texas resolved to retaliate by breaking the east-bound rates from Kansas City. In this endeavor they were aided by the Missouri River and Fort Scott Road. The route thus formed was: Southwest via the Fort Scott Road 98 miles to Fort Scott; thence northeasterly via the Missouri, Kansas and Texas, 254 miles to Hannibal, where connection was made with the Wabash Railway for all eastern points. Over this route the Canada Southern Freight Line cars were run, and contracts for large quantities of meats were made at rates below those which the associated roads felt at liberty to go. Moreover, as the association would not make time contracts, shippers preferred the route which accorded them that privilege. This diversion, together with the amounts paid by the Saint Louis to the Chicago roads, may be assigned as the causes of the disruption of the association.

Question 13. To what extent do the boats plying on the Missouri River operate as a limitation upon the power of the associated rail lines to establish rates between Saint Louis and Missouri River points?

Answer. To no very appreciable extent, from the fact that the navigation of the Missouri River has not been attended with marked success.

Question 14. Please to state the terms of the apportionment scheme under which the Chicago roads engaged during the month of April, 1878, in competitive traffic to and from Missouri River points.

Answer. When the two Saint Louis roads withdrew, the five remaining roads resolved to continue their association. The allotment of 33 per cent. to the Saint Louis roads was added, proportionately, to the percentages previously given to those roads; and for their government the rules of the South-Western Rate Association were adopted. Practically, therefore, it was a continuation of the association, less two members.

Question 15. In what manner and to what extent do you act as an arbitrator in settlement of disputes between roads composing the association?

Answer. The commissioner construes the articles of association and the resolutions that may be adopted. Also, he determines differences that arise in the application of the rules or the rates and classification established. His decision is binding until reversed by the executive committee or board of managers.

Question 16. In what manner and to what extent do you act as an executive officer in the matter of raising or lowering rates?

Answer. It is the province of the commissioner to see that rates between the Atlantic seaboard and Missouri River points, in either direction, are made the same via Saint Louis, Hannibal, or Chicago. Also, he equalizes the rates on freight from interior points in Pennsylvania, Ohio, and Indiana.

Question 17. Please to furnish a copy of the bill of lading under which goods are shipped either from Chicago to Missouri River points or from Missouri River points to Chicago, and state whether in case of loss or destruction of goods the shipper would

proceed against the various railroads jointly and severally or against the particular road to which the goods are delivered?

Answer. Each company uses its customary form of bill of lading. I inclose sample of those issued by Chicago, Rock Island and Pacific Railroad, marked A. The claimant would proceed against the particular road upon which the loss or damage occurred. The association merely provides a method in which the joint business of the roads shall be done. It does not treat with the public. The several roads are left free to do that.

Question 18. What information are you supplied with, daily, by which you are enabled to ascertain whether the various roads are or are not conducting their business in strict compliance with the terms of the apportionment scheme?

Answer. Impression copies of all way-bills of freight covered by the agreement are sent to the commissioner. These are examined to see that the freight is billed correctly, and that the returns of business made to him by the auditors of the respective companies compare with the billing. Any discrepancies, omissions, or unauthorized rates are corrected by the commissioner, whose duty it is to extend all shipments at the established rates and actual weights.

Question 19. Can the conditions of the agreement entered into by the several companies, parties to your association, be enforced as between themselves, and also as against or in the interest of third parties?

Answer. It has not been generally presumed that the terms of such agreements could be legally enforced. This is evidenced by the fact that no suit has been commenced by parties to similar compacts to recover money withheld from them by their partners.

Question 20. Will it be possible to give to your apportionment scheme a legal existence? In this connection, please to present any legal opinion or opinions which may have come to your notice as to whether compacts of this character between corporations can or cannot acquire validity under the law of corporations.

Answer. Upon this question I have the opinion of three prominent attorneys. One is certain that, under the incorporation law of Illinois, apportionment schemes could acquire a legal status; another has no doubt whatever that, in the absence of statutes to the contrary, an agreement between corporations to pool certain traffic on specified conditions would be legally binding; and the third, while differing from the position first stated, thinks the courts might uphold them on the ground that they were good bargains.

A case in point, and the first, I believe, in this country, has just been decided in the New York supreme court, special term. It arose on the petition of a stockholder of the Western Union Telegraph Company, who prayed that the pooling arrangement between that company and the Atlantic and Pacific Telegraph Company be set aside, on the ground that it was injurious to the Western Union Company, was carried into effect without due notice to the stockholders, was against public policy, and beyond the powers of the company. The court dismissed the complaint. After reviewing the laws of New York bearing on the case, the judge said he failed to see that the consolidation of offices, where there was not enough business for two, was against public policy or *ultra vires*; neither was any arrangement which the company might make to prevent ruinous competition against public policy; and, as the arrangement was manifestly for the interests of all parties concerned, there was nothing which called for the interference of the court. That decision followed the leading English case, *Hare vs. London and Northwestern Railway Company*, 30 Law Journal (chanc.), 820. In that case the court said: "An allegation that injury would be caused to the public by the prevention of competition in consequence of working agreements between several companies was not sufficient to invalidate such agreements; and an intention to prevent such competition as would be ruinous to the companies and not tend to the benefit of the public was good ground for holding such agreement to be valid." (See, also, *Midland Railway Company vs. London and Northwestern Railway Company*, L. R., 2 Eq., 524, in which similar rule was laid down.)

Subsequently a joint committee of Parliament inquired into the matter, and their conclusion was thus reported: "Whether division of traffic receipts on the joint-prize principle is valid at law or not is open to considerable doubt. It is clear that the courts will not set aside such an arrangement on the ground that it is illegal in the sense of being contrary to public policy. But the doubt is, whether such an arrangement, which is in effect a sort of partnership, is not *ultra vires* of such company, and whether it may not, therefore, be set aside at the instance of a shareholder. This doubt, the committee are advised, is such as to make it unsafe for companies to enter into such agreements without the sanction of Parliament, although there is evidence that they sometimes do." This conclusion was based on advice from the solicitor-general.

Taken in connection with the New York decision referred to it warrants the assumption that such compacts would not be declared invalid as being against public policy. In fact they have been recognized by the United States courts. The agreement be-

tween the Atchison, Topeka and Santa Fé and the Kansas Pacific Railroads was approved by the United States circuit court for the district of Kansas. This action was necessary because the latter company was in the hands of the court and operated by receivers appointed by and responsible to the court. In like manner the agreement made June 1, 1878, between the Kansas Pacific, Union Pacific, and Colorado Central Railroad Companies was filed in the United States circuit court at Leavenworth, Kans., for approval, because the former company is under control of the court.

As further proof that traffic compacts may be formed under authority of general laws I may cite the famous English and Scotch traffic agreement. Eight railway companies were parties to it. They agreed to divide certain traffic receipts according to fixed percentages, by authority (as recited in the agreement) of the railways clauses consolidation act and other acts special to the several roads, which empowered them to contract with other companies for transportation facilities and services. In so doing they assumed that their action was, practically, a consolidation to the extent of the agreement.

Notwithstanding these precedents I am strongly of opinion that special authority is necessary to give permanence and assurance to apportionment schemes. Such result would be desirable not less to the public than to the railroads; and when, by proper representation, this is made manifest, there should be no difficulty in securing the necessary legislation. Opinions would differ as to the manner in which this should be accomplished. Some would contend that legislation by each State in which the roads desiring to unite are located would be necessary; others, that a general act of Congress would be sufficient. The latter would be simpler, and, if valid, would be more effective. The objection to State legislation is, that those bodies meet frequently, are actuated by local prejudices, under the influence of which one body might so alter or amend the charter as to defeat a scheme whose operations would extend through several States.

Question 21. Has any desire yet been expressed by any one of the roads composing the South-Western Rate Association, or by the roads composing the more recent association of Chicago roads, that the compact shall acquire a legal existence, and have measures yet been resorted to for the attainment of that object?

Answer. No direct effort, I believe, has been made to impart a legal existence to apportionment schemes. Railroad managers are conservative and hesitate about inviting legislation of a general character. Besides, those who have studied the question believe the people are not yet prepared for such measures. As regards the members of this association they are generally of the opinion that the competitive business of railroads will, eventually, be directed by organizations acting under legislative authority.

Question 22. What, in your opinion, are the advantages to be derived from an association of railroads recognized by the laws and transacting their joint business under authority of law?

Answer. The advantages may be considered as they relate 1st, to the people, and, 2d, to the railroads.

1. A union of rival lines will better serve the public interests than would the same roads if they were to scramble for patronage. Low rates between competitive centers are assured. In fact, discussion now points to prescribing minimum rates below which the railroads shall not go. The demand is not for low rates, but for equal rates—not sudden changes, but steady quotations. The supposed advantages which accrue to shippers in the event of a "war" are largely speculative. Rates then fall 50 or 60 per cent., but they are only given from day to day. The rate from a producing or receiving center may be 10 cents per 100 pounds to the market; but it cannot be guaranteed beyond the day upon which it is given, hence the dealer derives little advantage from it, because he is unable to purchase and secure deliveries on the same day, and by the next day or two the rates may be advanced. When the rate is, say, 10 cents, shippers ask that this or a higher rate be guaranteed them for a week, or sufficiently long to enable them to purchase and deliver; but they are denied, and thus their business is deranged. A steady rate of 15 cents or 20 cents would, in such case, be preferable to one of 10 cents or 12 cents subject to daily change. Apply the same conditions to merchants. Two do a like business side by side. One goes to New York when rates are low, makes his purchases and ships at what are thought to be advantageous rates. A week later his rival makes similar purchases, and, rates having fallen still lower, avails himself of them, and is thus given an advantage over his competitor which is in no respect due to sagacity or enterprise, but to the circumstance of having happened to ship when rates had dropped to the lowest figures. Advantages thus acquired would enable men of inferior ability to undersell their more talented competitors. Such result would reverse the natural order of things and violate the common law. All are entitled to be treated alike, but they cannot be assured that right unless the roads act under direction of a well-regulated association.

2. The benefit to railways would be in the assurance of remunerative rates. The volume of tonnage might not be enlarged, but every ton hauled would be carried at a

profit. There could be no object in giving special rates. Local business would be protected and not be made to pay for losses incurred in carrying through traffic at nominal figures.

The reason why the advantages enumerated have not been more apparent is because the various compacts have always been hampered by conscious weakness. They depended solely upon the honor of members. Parties never felt that they could go into court and sue for balances withheld from them; hence there has been constant distrust lest, when any member should be called upon to pay over a large amount, he would refuse, and a disruption ensue. This sense of uncertainty was increased by the fact that none of the agreements were made for extended periods. Their duration was limited to three months or a year at the longest. Such fitful efforts induced the freight agents to believe that the agreements would have but a brief existence, and that, as the return to former things could not long be delayed, they must not, in the mean time, relax any effort—legitimate or not—to retain and increase their company's proportion. The diffusion of that spirit has often led to a disregard of the requirements of the compacts, and, as there was no adequate power to enforce them, failure and disruption followed. These experiences are largely owing to the character of the people. The prevailing idea of liberty is to be free from restraint; and because compacts, to be efficient, must curtail the authority of managers and agents, those officers revolted against the surrender, and thus defeated the objects of association.

It is singular that railroad men should prove intractable; for in no other sphere of civil life is the spirit of subordination to authority more carefully cultivated. Yet it is a fact that those who are unmanageable in other respects succumb most readily to the requirements of law; for which reason I believe that a compact formed by virtue of special enactment would be faithfully observed by railroad men; and, until that result is reached, apportionment schemes, however well devised, will have but a precarious existence and an imperfect trial.

Another drawback has been the omission to provide for arbitration. Compacts cannot stand without mutual concessions. Yet parties frequently refuse to yield. Then arbitration should be invoked. That has long been the custom in Great Britain. Perhaps the first instance was the award made in April, 1857, by Mr. Gladstone. Four railway companies, running north from London, were unable to agree upon the proportion which they would accept of the receipts of certain competitive traffic. They agreed to refer the matter to Mr. Gladstone and abide by the award he should make for a period of fourteen years. One company claimed 100 per cent. of the business between London and five of the northern cities! The others, certainly, could not lose by the award. It stood for the period named, and, during all that time, no difficulty was experienced.

The English and Scotch traffic agreement, which included seven and afterward eight railways, had a general arbitration clause, which provided that any question of difference should be decided by the railway clearing-house committee, or by Mr. Gladstone, or, failing him, by Mr. Laing, or, failing him, by an arbitrator to be chosen by the companies, or by one to be named by the attorney-general. In every case the award was to be final and conclusive between the parties.

The same feature was embodied in the Humber and other traffic agreements. The reference covered disagreements as to rates. The nearest approach we have made thereto was when the trunk lines, last winter, referred to Mr. Albert Fink the disagreement as to rates from Boston to the West, and agreed to abide by his decision. A more frequent display of such intelligence, instead of the usual resort to "war," would enhance both the reputation of the managers and the credit of the roads.

Question 23. Do the Saint Louis and Chicago roads, formerly parties to the South-Western Rate Association, continue their soliciting agents at those cities, and also at New York, Boston, Philadelphia, and Baltimore, and do they also continue them at Missouri River points?

Answer. The soliciting agents are continued. Most of the companies have only local agents at their terminal points on the Missouri River. Those they are obliged to keep. Neither have they any agents in the Western cities. Others, again, maintain a numerous staff of soliciting agents located respectively in Boston, New York, Philadelphia, Rochester, and Cincinnati, in the East; and at Kansas City and Leavenworth, in the West, the latter with jurisdiction as far west as Colorado.

Question 24. In your opinion, do not the efforts of these soliciting agents tend to increase the practical difficulties of carrying out the terms of the apportionment; and does not the success of an apportionment compact require the abolishment of soliciting agencies?

Answer. An apportionment scheme, if properly carried out, leaves nothing for soliciting agents to do. Their continuance depends upon its failure. Repeated efforts to remove them have been met with the objection that the association had too little assurance of permanence to warrant their withdrawal. Thus the association, from its inception, has been hampered by men whose chief interest was to create disturbances, and in that respect they are eminently successful. Their avocation makes them dis-

trustful. Any considerable movement of freight over another line excites their worst suspicions, because they will not concede that a rival road can *fairly* take a lot of freight from a common point. Each agent believes his line to be *the best*, and asserts positively that, in the event of a struggle, it could certainly secure much more business than could any other line. Hence many of the troubles encountered are traceable to the excessive zeal of these satellites, their multiplicity and assurance. I believe that apportionments cannot be made successful unless the soliciting agents are withdrawn, and the business divided is controlled and solely managed by officers acting for and subordinate to the association.

Question 25. In your opinion are special contracts to favored shippers opposed to the true interests both of the railroad companies and of the mercantile community? Also please state your view as to the rule of policy which should prevail in regard to the grading of rates according to the quantity of freight shipped at one time.

Answer. The granting of special rates is a most pernicious practice. It tends to build up monopolies. They are not given to small shippers, but to wealthy parties who have no need of such favors. They are oppressive, and should be regarded as wrong. A firm whose transactions are large can obtain rates much below those allowed dealers whose means are limited. The former is given 25 or 30 per cent. off the regular rates; the latter have to pay full rates. True, there are conditions which justify discriminations when large amounts are shipped, but the articles of chief concern—grain, cattle, and lumber—are carried in car-loads, and the charge should be so made; then the man who ships 100 car-loads would have to pay the same price per car as the man who ships but ten. Otherwise, the small dealer has not an equal chance in the market. If one man can ship 50 car-loads at \$5 per car less than the man who can only ship 10, the former can afford to do his business for \$5 per car less profit, which might leave no margin to the small shipper. Should both have to buy from the same producer, the man of small means is unable to compete against his richer neighbor. Granted that men of large means always have the advantage over those less favored, the wrong consists in railroad companies widening the difference by giving preference to the rich who do not need it.

A large shipper of live-stock who has a special rate may say to his neighbor, "I've got a rebate of \$10 per car; I can ship that much cheaper than you can; you give me \$5 per car and I will ship your stock along with mine at my special rate." The small shipper accepts the offer, because thereby he saves \$5 per car. But why should he, in justice, be compelled to pay a tax to his richer neighbor?

I believe it unjust to the majority of shippers, and also injurious to the railways, to make quantity the sole requisite to secure special rates. Contracts founded on that principle constitute favoritism, the effect of which is to benefit a few and inflict penalties on many.

Besides, those who receive special rates are often deceived thereby. Suppose the tariff to a given point is 40 cents per hundred. By dint of persistent representation, one firm obtains 25 per cent. off the regular rate. With this 30-cents rate they are greatly elated; but their rival goes to the carrier and secures a rate of 20 cents. Such cases frequently occur.

The whole system is fraudulent. Shippers assure the carrier that, if allowed special rates, they will give the road their entire business. As soon as the rate is secured, they go to another company and use the concession to secure a better one via that road. Thus it appears, when a number of roads exchange lists, that the same shippers are found to have contracts with them all. In fact, the system has become so demoralizing, vicious, and hurtful as to impel many to wish that it could be prohibited by law. The latter idea has been publicly advocated. Most notably was this done in the report of a special committee of Lords and Commons appointed in 1872. After careful investigation of the practice, which had become notorious in England, they said: "We recommend that, in order to enable all persons to be in a position to ascertain with ease whether they are treated on an equality with others, it should be compulsory on the railway companies, under adequate penalties, to exhibit at their stations, when required, to the persons using the station, a true list of the whole of the fares and rates charged from that station, and to give full information as to special contracts, rebates, drawbacks, and other deductions or charges. The department of government charged with the supervision of railways should further be empowered to require returns of all tolls and charges actually levied by railway companies, with full information as to rebates and deductions, or to appoint officers to examine the books of the companies."*

Question 26. In an apportionment scheme such as yours, is it not necessary that the commissioner should maintain in his office a clearing-house establishment in order to carry into effect the terms of the apportionment and in order to adjust balances?

Answer. It is.

Question 27. In your opinion, is it impossible to maintain an agreement of rates except on the basis of an agreement as to the division of traffic, or of the receipts from

* Report of Railway Companies Amalgamation, p. 39.

traffic, or, in other words, is apportionment of traffic or of the receipts from traffic an indispensable condition to the maintenance of rates?

Answer. No other means of maintaining rates have been devised. The most solemn agreements, conditioned solely upon honor, have signally failed; and the recourse, both in this country and in England, has invariably been to an agreement to divide either the tonnage or the receipts arising therefrom. Notwithstanding this uniformity of experience, I believe that a more effective and preferable plan can be devised. The object is to maintain rates. If this can be attained by a plan which shall at the same time allow each road to retain all the business it can naturally or legitimately acquire, the great desideratum will have been accomplished. The allotments of traffic are a constant source of contention. Rarely, if ever, are they satisfactory to all parties. The method of determining them is wrong. Where a number of roads propose to divide a given territory, unreasonable demands are made. A road which cannot, on equal terms, acquire a large business, but is in a position, if disposed, to injure that of others, and make it worthless to them, will urge that as a reason why it should be given more than it is fairly entitled to. For the sake of harmony, the demand is complied with; but it imparts to the others the oft-recurring consciousness that they are being blackmailed. Hence, if the necessity of agreeing upon divisions can be obviated, and agreed rates, withal, be maintained, the much-desired plan will have been discovered. This could, I think, be effected by a system of clearing-houses, organized under act of Congress, giving to the directors large and clearly defined powers.

In this connection I can but outline a plan. Congress should pass a law under which clearing-houses could be organized, with the right to sue for and collect balances or amounts declared by it. In the same connection the common law should be re-enacted, prohibiting unjust discrimination, payment of rebates and drawbacks, or the giving or offering of any unfair inducement to influence traffic. These acts should be declared misdemeanors and punishable as such. The commissioner of the clearing-house association should be empowered to construe the law and define what constituted unfair inducements, &c. Penalties double the amount of the rate which ought to have been charged should be imposed on the road convicted of a violation of these provisions, the amount thus recovered to be pro rated among the other members. The commissioner should be empowered to administer oaths, and, in the prosecution of inquiries or the trial of cases, should have authority to summon the accused or suspected parties and require them to answer under oath. If convicted, the wrong-doers or those who connived at or authorized the misdemeanor should, for the first offense, be severely censured, and for the second be dismissed from the service. Many of these provisions would, of course, have to be assented to by the companies upon their joining the association. Such assent would test the sincerity of their desire to have the business conducted honestly.

The clearing-house should appoint all the contracting agents, and should have the power to remove them for cause. The commissioner, or his assistants, should have free access to all books, papers, and sources of information kept by the companies. Impression copies of all way-bills should be sent to the commissioner, the accounts should be made up in his office, and all settlements between members should be made and the drafts passed through the clearing-house.

The manager of each road belonging to the clearing-house would constitute its board of directors. They should meet bi-monthly, or monthly, if necessary, to pass upon matters of general interest; and, if they should be unable to agree, the commissioner should decide the question, and his decision should be accepted as final.

The general freight agents would meet simultaneously with the managers to propose revisions or changes in the tariff, their recommendations to be subject to the approval of the managers. After approval, no deviation therefrom should be allowed except by authority of the association.

So distinct are the divisions of territory and the classes of traffic, that several clearing-houses would be required. The business west of Chicago and Saint Louis is entirely distinct from that east of those cities, and should be treated separately. A clearing-house for that territory would be necessary. Then the lines running east from Chicago and Saint Louis do a similar competitive business, and should be combined under one joint direction. The same is true of southern roads, and of the trunk lines on their west-bound business. These various organizations, being conformable to the same general law, would be so identical in interest and in their operations that their commissioners could, on occasions of extraordinary moment, constitute an admirable board of arbitration. They should be nominated by the roads comprising the clearing-house, subject to confirmation by the head of the much-needed department of commerce, or, failing the creation of that office, then by the Secretary of the Treasury. Their decision, or that of a majority of them, should be made binding and conclusive upon the conflicting parties, and thus avert otherwise inevitable and destructive wars.

In this sketch I have presumed upon the readiness of all parties to acquiesce in any plan which shall be in harmony with our institutions, and, at the same time, insure

the maintenance of equal rates and the preservation of the rights and property of individuals.

The plan thus roughly outlined might not, in all respects, be feasible; but it could be modified and made so by a conference of men who have given special study to the subject. Railroad managers have not the time—even had they the disposition—to originate and think out available plans.

Question 28. In your opinion is it practicable to sustain a clearing-house establishment between railroads so long as the cutting of rates continues?

Answer. Such an one as I have in mind could not long be sustained unless agreed rates were maintained. The parties to the English clearing-house endeavor to agree upon rates; but the secretary states that he does not require to know the rates, ordinary or special, charged by the companies; that they are at liberty to make whatever rates they please, but it must be by mutual consent. Neither the act creating the clearing-house, nor the regulations which govern it, disclose any provision for insuring the maintenance of rates between common points. In fact, it seems merely to provide an excellent method of dividing the receipts from traffic in which two or more railroads share.

Question 29. Please to describe the manner in which the west-bound rates from New York to the Missouri River points, in comparison with rates from New York to Chicago and thence to Missouri River points, operated, during the month of April, 1878, in favor of the trade of Saint Louis and Chicago and against the trade of New York.

Answer. Rates from Chicago and Saint Louis were then reduced 60 per cent. or more. They were applied on local business only, or that which originated east of Buffalo and Pittsburgh. Freight from the seaboard was charged former rates. This discrimination is shown by a comparison of the rates per 100 pounds given from Chicago to Missouri River points, on local business and on freight from the seaboard respectively:

	First Class.	Second Class.	Third Class.	Fourth Class.
	Cents.	Cents.	Cents.	Cents.
On local business	18	18	15	10
On business from seaboard	85	68	45	30

Corresponding differences were made from Saint Louis. The intention was to restrict the fight to the local traffic of Chicago and Saint Louis. That was in accordance with the request of the trunk lines. They wished not to be drawn into the controversy, and upon the first indications of war they asked that the contest be so restricted. The fight, however, became more severe and prolonged than was anticipated, and, if continued, would soon have excluded New York merchants from the Missouri River territory.

Question 30. Please to state as concisely as you may be able the nature of the contest now going on for the traffic of Colorado and New Mexico.

Answer. West of the Missouri River the business of Colorado and New Mexico takes either of three lines, the Atchison, Topeka and Santa Fé, the Kansas Pacific, or the Union Pacific, though, until late in 1877, the latter road was hardly in position to compete for the business. At Cheyenne, 516 miles west of Omaha, connection was made with the Denver Pacific, but that road being controlled by the Kansas Pacific, exacted arbitraries which excluded the Union Pacific from Denver and points southwest thereof. The business was restricted to the Atchison, Topeka and Santa Fé and the Kansas Pacific. Each road had two terminal points on the Missouri, the former at Atchison and Kansas City, the latter at Leavenworth and Kansas City. To avoid ruinous competition these roads on the 1st of June, 1877, agreed to a division of earnings for one year. Either party could withdraw on thirty days' notice. The compact embraced the freight and passenger earnings, *local as well as through*, except that which arose from government transportation (including mails), construction material, and company freight. The gross earnings were divided on the basis of the earnings of both roads for the year ending February 28, 1877, which, exclusive of government business, were:

Kansas Pacific \$2,784,836, or 53.49 per cent.
Atchison, Topeka and Santa Fé \$2,421,361, or 46.51 per cent.

Forty per cent. of the earnings were to be deducted for operating expenses, and the remaining sixty per cent. were to be divided. If both parties assented the percentages could be revised quarterly, otherwise they were to stand during the year. A joint auditor had charge of the accounts and made settlements. The contract expired by limitation June 1, 1878. Several causes operated to prevent its renewal. In November preceding the Union Pacific completed a new road from a point just west of Cheyenne southward, via Longmont and Boulder, to Golden, there connecting with the Colorado Central Railroad, and by that route westward reaching Central City, Blackhawk, and Georgetown, and eastward by the same road gaining access to Denver. Entering the mining towns, as it were, from behind, the Union Pacific made the rates to those

important points the same as to Denver. This was a hard blow at the Kansas lines. They, on reaching Denver, had to pay local rates on the Colorado Central in order to reach the mining towns. Then, by means of the Denver and Rio Grande Railroad, a narrow-gauge road running southward from Denver via Pueblo to El Moro and Garland City, the Union Pacific was enabled to compete for the traffic of New Mexico. Having the longest route, in order to secure a share of the business, they cut the rates and made contracts with large shippers. As the Kansas lines had to meet these cuts the benefits anticipated by the formation of the compact were lost.

Moreover, the local business of the Atchison, Topeka and Santa Fé Railroad had increased so rapidly that the company was unwilling any longer to divide the earnings from local business, but would agree with the Kansas Pacific and Union Pacific in a tripartite division of the competitive traffic.

Question 31. Please to state facts in relation to the recent war of rates between the Union Pacific and the Kansas Pacific and the Atchison, Topeka and Santa Fé Railroads with respect to the Colorado traffic, as follows:

(a) Facts in regard to the fall of rates on the various classes of west-bound and on the various classes of east-bound.

(b) The proportion which the east-bound bears to the west-bound tonnage.

(c) What measures in your opinion it will be necessary to adopt to prevent railroad wars between the parties to this contest.

Answer. (a) The struggle for Colorado business began immediately after the opening of the Union Pacific route into that Territory. The Iowa lines first excluded this traffic from their pool, then, in March last, on the withdrawal of the Saint Louis roads from the Southwestern Rate Association, it was excluded from division among the Chicago lines. This action extended the contest to Chicago. It did not, however, become desperate until the following month. Rates were then made ridiculously low. Merchandise was carried from Chicago to Denver for 10 cents per 100 pounds—a distance of 1,200 miles. At that rate the division of the line between Chicago and Council Bluffs, Iowa, 492 miles, was about $1\frac{1}{2}$ cents per 100 pounds. The lines via Kansas City received, on certain business they carried, 3 cents per 100 pounds as their proportion from Chicago to Kansas City. It was mortifying, and suggested the necessity of an authority to stop such wanton waste of revenue and property.

While the traffic fight was raging, an equally severe struggle was progressing in Congress. The Kansas Pacific had before Congress a bill to compel the Union Pacific to prorate (on a basis to be determined by a commission) from Ogden, via Denver, to Kansas City. The Union Pacific resisted the measure with all the arts and appliances known to men great in resources and ability; but their efforts were unavailing. The committee agreed to report the bill for passage. Anticipating that result, the Union Pacific quietly bought up the depreciated securities of the Kansas Pacific, acquired control, and then had the hostile legislation stopped. When this had been accomplished, tariff rates to Colorado were restored. This achievement may be considered masterly. Its effects are already becoming apparent. It gives to the Union Pacific control of the trade of Denver and the territory west and northwest thereof. The Atchison, Topeka and Santa Fé terminates at Pueblo, 120 miles south of Denver. The Denver and Rio Grande Railroad connects the two cities. That road, although not owned by the Union Pacific, is in its interest, and is directly antagonistic to the Atchison, Topeka and Santa Fé; hence the latter is charged, from Pueblo to Denver, rates which exclude it from Denver. Whether the Topeka company will extend their road to Denver is a matter not yet determined. Their rivals assume that they will not, claiming that, as the Union Pacific can exclude them from the territory west of Denver, it will not be worth while to build a road 100 miles long over a difficult country simply to obtain their share of the local business of Denver.

(b) Of the traffic carried between the Missouri River and Colorado points, during the year 1877, the relative proportions were: east-bound, 34 per cent.; west-bound, 66 per cent.

(c) It now becomes necessary to describe the contest for the business of Southern Colorado and of New Mexico. So long as the Atchison, Topeka and Santa Fé road manifested no actual intention of extending its line beyond Pueblo, the Denver and Rio Grande road worked harmoniously with it, and forwarded its traffic to the mining towns beyond and southward on the way to New Mexico and Arizona. But, when work upon the extension to New Mexico began, a struggle for the strategic points ensued. Both roads were projected into the same Territory, and it was well known that the possession of certain locations would enable the fortunate company to build its road through the most desirable passes. Raton Pass, situated 15 miles south of Trinidad, Col., was the key to New Mexican route. Such is its nature that but one broad-gauge line can be run through it to advantage; both companies claimed the right of way. By remarkably quick movement the Atchison, Topeka and Santa Fé road first reached the pass, took possession, and began the work of construction; soon afterward the opposing company appeared and matters for a time were very threatening, but, becoming convinced that the Topeka company was determined to build, the Rio Grande party with-

drew and transferred their outfit to Canyon City, 41 miles west of Pueblo, whence they began to run a line up the Grand Cañon toward south Arkansas, over a right of way claimed by the Canyon City and San Juan company, a corporation formed in the interest of the Atchison, Topeka and Santa Fé Railroad. Again the latter company anticipated them, this time by just an hour, whereupon another struggle ensued, which, for some days, threatened to be serious. Then an injunction was served on the Topeka company; this, however, was speedily dissolved, and, at both important points, the Atchison, Topeka and Santa Fé came off victorious.

In all these movements it was presumed that the Denver and Rio Grande was supported by the Union Pacific. That fact, if established, would enlist popular sympathy for the Topeka road, because the latter has undertaken the stupendous work of forming a transcontinental line by making connection with the Southern Pacific Railway.

The extensions to be built by the Atchison, Topeka and Santa Fé Railroad, during 1878, are as follows: Starting from La Junta, a point on the main line 62 miles east of Pueblo, the road will run southwest to Clifton, N. Mex., 110 miles, thence to Las Vegas and Albuquerque, N. Mex., 220 miles; the latter place is about 60 miles south of Santa Fé.

The company also expect this year to build from Canyon City to South Arkansas, 57 miles; and from Pueblo to Canyon City, unless satisfactory arrangements can be made with the Denver and Rio Grande Railroad for running powers over that company's road between the two cities.

Diverging from South Arkansas, the objective point up the Arkansas River is Leadville, 61 miles; Lake City (35 miles) is also to be reached via the Marshall Pass. A wagon-road to the latter point is now being built. By the competition of these lines the Atchison, Topeka and Santa Fé expects to control the business of New Mexico, Arizona, and old Mexico, at least to a great extent; also the business of the Leadville and San Juan mining regions; while, in the near future, they hope to form part of a through system to the Pacific coast.

The Denver and Rio Grande likewise announces its intention to build from Canyon City to Leadville, and to extend into the San Juan mining region. At present, however, it seems to have been forestalled by the sagacity and enterprise of the Atchison, Topeka and Santa Fé.

The outlook, certainly, is most favorable for the latter company. Thus, while Northern Colorado appears to have been possessed by the Union Pacific, the Atchison, Topeka and Santa Fé successfully disputes the entrance to Central and Southern Colorado, while, in a measure, it excludes its rivals from the most accessible avenues to New Mexico.

The Union Pacific has succeeded practically in absorbing the Kansas Pacific and Colorado Central Railroads. By an instrument filed June 1, 1878, for ratification, in the United States court for the district of Kansas, it is agreed that the gross earnings from all passenger and freight business of the three roads shall be pooled and divided in proportions which will give to the Union Pacific about 73 per cent., to the Omaha Bridge 3 per cent., to the Colorado Central 5 per cent., and to the Kansas Pacific 19 per cent. This agreement is to remain in effect fifty years from the date of its inception.

At the same time the Denver and Rio Grande gave notice to all railroads, requesting them not to bill to stations on its line, but to Denver, care Denver and Rio Grande Railroad. This was, evidently, intended to exclude the Atchison and Topeka Road from Denver. The combination evinces a disposition to continue the antagonism already existing between the Union Pacific interests and those of the Atchison and Topeka company. Manifestly the two are destined to be great rivals. In many respects they compete for the same business. If they shall do this in a hostile spirit a renewal of the war in rates is inevitable. I know of no better field for government interference. Nor is there another so good. These roads have been largely built by means of donations of public lands; and the Union Pacific certainly, to a greater degree than perhaps any other road, is directly amenable to government control. It is mainly owned and controlled by one man. I hold that no one has the right to so use or misuse his property as to intentionally destroy that of his fellow. Now, if it should become apparent that the policy of the Union Pacific was to force the Colorado and New Mexico rates down to unprofitable figures and keep them there in order to bring financial ruin upon its rival, the government should interfere and effectually stop such procedure.

The prevailing impression is that a war can be averted only by an apportionment of the competitive business. With that and the further view of increasing the income and efficiency of the respective roads, and yet not burden the public with excessive charges, I understand that one party has already made concessions for an equitable arrangement. These overtures, however, have been declined.

There are no natural difficulties in the way of forming an apportionment of Colorado and New Mexico business. It crosses the Missouri at certain prominent points,

and east thereof is carried by roads which terminate in Saint Louis, Hannibal, and Chicago.

It is so different from other Western traffic that a distinct apportionment of it should be made between all the roads clearly entitled to a share in it. Such a plan would not interfere with local business, but would include only the through business which is strictly competitive. Disagreements might arise as to the relative percentages to be allowed various roads; but in all enlightened communities disagreements are obviated by referring them to arbitration, each party thereto first assenting that the award shall be final and conclusive.

Question 32. Please to describe the apportionment scheme known as the Omaha pool, stating what classes of traffic it includes, the means employed for ascertaining the amount of freight actually carried by each road, and the basis upon which the apportionment is made.

Answer. The so-called Omaha pool is a combination of the Chicago, Burlington and Quincy, Chicago, Rock Island and Pacific, and Chicago and Northwestern Railways. It was formed in 1870 on the principle that each road should have an equal share of the revenue arising from the freight and passenger traffic carried by these lines between Chicago and Council Bluffs, Iowa. The agreement is verbal, has never been committed to paper, and is utterly devoid of machinery. This was possible because the circumstances under which it is carried out are singularly favorable. The lines are about equal in length. Their managers reside in Chicago, can communicate readily, and, from long intercourse, have confidence in one another. Besides, the business was simple, being all carried between two terminal points. They are thus enabled to keep close watch upon and equalize the tonnage. In this they are aided by the trunk lines, which deliver all freight destined for Council Bluffs, for one week, say, to the Rock Island line, next week to the Burlington, and next to the Northwestern.

The managers of the three roads meet monthly to settle the accounts and take whatever action may be necessary. Each road makes up its own statement of business, and such is the confidence reposed that their accuracy is not questioned. Some check is supplied by a statement of the amount of freight transported across the Omaha bridge, which is sent monthly to the manager of each road interested.

At first it was assumed that the cost of doing the business was 45 per cent. for passengers and 50 per cent. for freight. Deducting this from the gross earnings, the remainder, i. e., 55 per cent. of passenger and one-half the freight earnings, was divided equally. In 1874 it was agreed that the gross earnings from all passenger traffic eastward and from that portion of the westward which originated at Chicago, should be divided equally, while each company would reserve to itself 45 per cent. of the earnings from passenger business which originated east of Chicago. Exception was made of the latter because two of the companies were compelled to maintain eastern agencies on account of their southwestern lines, and the allowance reserved furnished an incentive to solicit traffic.

In January last Colorado business was excluded from the pool. The receipts from all other business carried between Chicago and Council Bluffs, except compensation for carrying government mails, I understand to be included in the Omaha pool. This combination possesses such favorable conditions that it cannot be cited as a fair illustration of the success of the plan as applied to American railways.

Question 33. Please to mention and describe any other pooling arrangements formed in the Western States between railroads.

Answer. To describe or even enumerate all the pooling arrangements in the West would require more time and space than are at command. The Illinois Central alone have in this State and Iowa more than twenty pools. The Chicago and Alton have about a dozen. They all partake of the same general character, being an agreed division of the receipts arising from the traffic which originates at competitive points, and present no features of special interest.

Question 34. Please to mention some of the more important pooling arrangements which relate to passenger traffic.

Answer. As already stated, the agreement between the Atchison, Topeka and Santa Fé and Kansas Pacific Railways included passenger traffic; so also does the Omaha pool. In like manner the recent agreement between the Union Pacific, Kansas Pacific, and Colorado Central Railroads includes passenger earnings; so also does the pool of Chicago and Saint Louis business between the Chicago and Alton and the Illinois Central Railroads; likewise the pool of Chicago, Milwaukee, La Crosse, Winona, Saint Paul and Minneapolis business between the Chicago and Northwestern and Milwaukee and Saint Paul Railways, and the pool of Boston and Portland business between the Eastern and the Boston and Maine Railroads. Several English agreements that I examined embraced passenger traffic.

Question 35. Please explain why there has been so much less trouble among competing companies in regard to their passenger traffic than in regard to their freight traffic.

Answer. In the cases mentioned in my last reply the importance of the passenger

business is very great. Especially is this true of the Chicago and Saint Louis, Boston and Portland, and English compacts. In these the passenger earnings nearly equal, and in some instances exceed, the receipts from freight. Those are exceptions. As a rule passenger earnings constitute but a small proportion of the gross receipts. Hence the efforts of managers have been directed to protect the traffic which formed the chief source of revenue. In doing so they expected that explicit agreements as to freight would lead to the better conduct of passenger business. Besides, the spirit of competition has never entered so fully into the passenger business as it has into the freight. Passenger agents, after agreeing upon the amounts to be paid for commissions, usually content themselves with advertising their routes, then leave the business to divide itself.

Another reason is, that where there is considerable difference in the length of competing routes, and connections are close, the long route cannot, by partial concessions, induce passengers to submit to the loss of time and resulting expense. Then, freight is dead and can be sent by routes 200 or 300 miles longer than the direct route; but this is not the case with passengers. They choose for themselves, and cannot be diverted hundreds of miles out of their way.

Still another reason why less trouble has been experienced in passenger business is that, unlike freight, it cannot be contracted for a year or two ahead. That feature has been the bane of freight traffic. It cannot affect passenger business. The deductions, then, are that fewer roads enter into the competition for passenger business. The competition is less active and extreme; hence the necessity for its apportionment is by no means so urgent. Nevertheless, I think the vicious practice of paying commissions will not be abolished unless competitive passenger business is treated in manner similar to that proposed to be applied to freight.

Question 36. Is it not generally true that railroads, parties to an apportionment scheme, are much more strongly inclined to withhold traffic which can be regarded as local or non-competitive than they are to allow it to be included in an apportionment, and does not this motive tend to give to such schemes sharply defined limits?

Answer. The statement contained in the inquiry and the conclusion are undoubtedly correct.

Question 37. Does not the experience of apportionment compacts seem to indicate clearly that one of the conditions to their success is that each road entering into such a compact shall have a clearly defined interest in all the traffic apportioned?

Answer. It is.

Question 38. Please to state, as clearly as you may be able, the effect upon the east-bound rail rates from Chicago exerted by the rates which, from time to time, prevailed on east-bound freight from Milwaukee over the route formed by the lake steamers in connection with the Detroit and Milwaukee Railroad and its eastern connections by lake and rail.

Answer. The Detroit and Milwaukee Railroad, running between Detroit and Grand Haven, and thence by steamship line across Lake Michigan, forming connection with Milwaukee, claimed that in consequence of their route being partly by lake they should be allowed to make somewhat lower rates from Milwaukee to the East than were made from Chicago to the East. If allowed, it would give Milwaukee, a station 86 miles further distant from the East by rail, a decided advantage over Chicago. Therefore, the all-rail lines declined to consent to it, whereupon the Detroit and Milwaukee Railroad made lesser rates, regardless of the objections. This was done to the greatest extent and its effect felt the most during the winter of 1875-76, when there was a pool of the east-bound trunk lines from Chicago to the East; and, as the season was remarkably mild, boats could, without difficulty, ply regularly between Milwaukee and Grand Haven. Lower rates were given via that route than could be obtained from Chicago. At Detroit the Grand Trunk forwarded the freight to the East. Eventually, these and similar procedures from Peoria and other interior Illinois points led to the disruption of the Chicago pool.

When the compact of 1877-'78 was formed, and Mr. Guilford placed in charge, the first serious question presented was to determine what should be the rates from Milwaukee. He decided, until he could look further into the matter, to allow the Detroit and Milwaukee Railroad to make rates $2\frac{1}{2}$ cents per 100 on grain, and fourth class less than the rates from Chicago. This action created a storm, and the decision was overruled. But the Detroit and Milwaukee continued to make the differences, as, in fact, they had been doing for months previous. The result would be to cause all grain from Minnesota to be shipped to Milwaukee, better rates to the East being thereby secured than if it were hauled 86 miles further to Chicago.

Question 39. Please to mention the particular difficulties which, in practice, prevented adherence to rates under the various forms of agreement for the maintenance of rates before the device of apportionment schemes was resorted to.

Answer. The principal complaint has been that managers would meet in convention, solemnly promise to maintain the agreed rates, then allow them to be cut, and special contracts to be made within a few hours after the adjournment. The fact was, no

one had any confidence in his rival. The freight agents certainly had not, for they seldom alluded to each other in polite terms. Thus, to lie and misrepresent were fast becoming elementary principles of a railroad man's education. I am not prepared to say that apportionment schemes cure these evil tendencies. They cannot without the force of law. In great part they depend upon the honor of the parties, which is by no means a sure reliance. The only prevention to the giving of unfair inducements which they supply is the certainty of discovering them and enforcing penalties therefor. My idea of a more effective plan is given in reply to question 30.

Question 40. In your opinion, should the cutting of rates be prohibited by law?

Answer. I think the method prescribed in my reply to question 30, reference to an impartial arbitrator or to a board of arbitrators, the best plan to avoid the cutting of rates.

Question 41. In your opinion, should the law prohibit change of rates without due notice to the public, and how many days do you think should constitute due notice?

Answer. The question is not a new one. It has been experimented upon in Europe. In France the companies are required to obtain the sanction of the minister of *Travaux Publics* to all rates before they can be published, and no modification of them is allowed except by consent of the minister of public works. In England the subject has been repeatedly considered, both by a royal commission, and, afterward, by a select committee of both houses of Parliament. Evidence was submitted that, as a rule, when changes in rates were contemplated, a month's notice was given, and the new rates took effect on the first of the succeeding month. Shippers considered that a month's notice would be sufficient if they could be assured of it. The commission reported as follows: "We do not think the suggestion that railway companies should be bound to give a very long notice to meet the convenience of persons who have entered into prolonged contracts is well founded, as it is the obvious duty of such persons to guard in the terms of their engagements against a contingency which is known to exist. But, on the other hand, it is impossible to provide in the ordinary current transactions of business for a sudden change in the cost of conveyance, which may be a material item in the market value of a commodity. We think, therefore, that railway companies should be compelled to give reasonable notice of any intention to raise their rates."* In that opinion I concur, and may add that I should think a notice of ten days would be reasonable.

Question 42. In the case of a war of rates between roads extending from Chicago to the Atlantic seaboard, or between Saint Louis and the Atlantic seaboard, do the roads extending west of those cities usually accept a proportion of the war rate, or do they exact a proportion of previously established through rates between points west of those cities and the Atlantic seaboard?

Answer. The lines west of Chicago and Saint Louis do not participate in the contests between the trunk lines to the East. In such event they exact their arbitraries; that is, what would be their proportion at their tariff rates. Neither do the trunk lines participate in wars between the roads west of Chicago and Saint Louis. During such conflicts they insist upon and receive their arbitraries west of the two cities named.

Question 43. Please to state the circumstances which induced the Chicago and Saint Louis roads to reunite in an apportionment scheme covering the Missouri River traffic.

Answer. It was evident that in no other way could remunerative rates be restored and maintained. This became clearly apparent immediately after the separation. Rates then fell 20 per cent.; and within two weeks a similar reduction was made, until it became unprofitable to do the business. Lake navigation from Chicago opened earlier than for the previous twenty years. That made lower rates to the East than could be obtained via the southern routes; hence the diversion of grain down the Mississippi River, comparatively, ceased, and the demand for cars to Chicago exceeded the supply. Meantime local rates were maintained, so that dealers could, with advantage, ship directly to Missouri River points, then reship to stations 100 miles or so less distant. But the manner in which shipments from the seaboard were affected was most remarkable. The rates on first-class from New York to Chicago were 75 cents, and to Saint Louis 96 cents, a difference of 21 cents; whereas the rate on first-class from Chicago to the Missouri River was only 13 cents. Consequently, parties could ship from New York to Chicago and there reship to Kansas City for 3 cents less per 100 than was the rate from New York to Saint Louis. The Chicago roads, having control of the longer mileage, were in position to retain their advantage, whereupon Mr. Fink, commissioner of the west-bound compact of the trunk lines, telegraphed to the parties concerned in the fight advising them to come together and see if a settlement of their differences could be arranged. The suggestion was opportune; all parties accepted, and in accordance therewith a conference was held at the Grand Pacific Hotel May 3 and 4, which resulted in the formation of the Southwestern Railway Association.

Question 44. Please to state the basis of the new apportionment scheme of the Southwestern Railway Association, mentioning the points in which it differed from

* Report Royal Commission on Railways, p. xlvii, sec. 105.

that which existed prior to the 1st of April, 1878, and also mentioning any changes as to the towns, the territory, and the roads embraced.

Answer. The present compact embraces the several roads which comprised the Rate Association, with the addition of the Wabash Railway. The Chicago division is composed of the Chicago and Alton, Chicago, Rock Island and Pacific, and Chicago, Burlington and Quincy Railroads, with their necessary connections. The Saint Louis division comprises the Missouri Pacific and Saint Louis, Kansas City and Northern Railways. The Hannibal and Saint Joseph Railroad via Hannibal, operated in connection with the Wabash Railway, constitutes the Hannibal division. Of the gross tonnage, east and west bound, after excluding lumber, 45 per cent. is allotted to the Chicago division, 45 per cent. to the Saint Louis division, and 10 per cent. to the Hannibal division.

Equitable rates are to be maintained, subject to such revision and adjustment as may be necessary to produce the agreed divisions of tonnage. When either division, or any line in a division, shall so far exceed its allotment as to require it to pay into the general fund \$5,000 or more per month, the rates are to be so adjusted as to divert the preponderance of tonnage to the divisions or lines which are short. This latter provision is the distinctive feature of the new agreement. Although believed by some parties to have been in the old agreement, it was not conceded by others. Now it is clearly understood.

In the event of a road or division exceeding its allotment, it retains 40 per cent. of the earnings derived from such excess for the expense of carrying the same, and the balance, computed by classes at the full rates established for the Saint Louis division is divided among the parties short in proportion to their deficiency. The association embraces all tonnage, except lumber, which passes the cities of Saint Joseph, Atchison, Leavenworth and Kansas City, in either direction, to, from, or through the cities of Saint Louis, Louisiana, Hannibal, Quincy, Burlington, Davenport, Peoria, and Chicago. The former agreement did not include business to or from Nebraska, nor the business of the Mississippi River towns just named, nor any business from any point in Illinois except from Peoria and Joliet.

The executive committee consists of five members instead of three, as before. They have power to act for the association in all matters pertaining to the common interests of the associated roads. The commissioner acts for the committee when it is not convenient to call the members, together. In other respects his duties are the same as they were under the Rate Association. He has charge of the clearing-house, and all balances are paid as declared by him. The agreement differs from its predecessors, in that it contains no provision for withdrawal. It remains in effect until January 1, 1879, with the understanding that a revision of percentages and renewal of the agreement will then be effected.

Question 45. Please to state the relative rates which prevail between Missouri River points and Saint Louis, and between Missouri River points and Chicago.

Answer. The following are the current rates per 100 pounds from Missouri River points to Saint Louis:

	First class, per 100 pounds.	Second class, per 100 pounds.	Third class, per 100 pounds.	Fourth class, per 100 pounds.	Wheat, in car loads, per 100 pounds.	Corn, rye, oats, and barley, in car loads, per 100 pounds.	Flour, in car loads, per barrel.	Beef and pork, ham and shoulders, in boxes, barrels, and tierces; hides, green; in car loads of 20,000 lbs., per 100 pounds.	Dressed hogs, beef and mutton, in car loads of 20,000 pounds, in refrigerator cars, per 100 pounds.	Dressed hogs, beef and mutton, in car loads of 20,000 pounds, in common cars, per 100 pounds.	Oil cake, fertilizers, bones, and scrap iron, in car loads of 20,000 pounds, per 100 pounds.	Live stock (except sheep), in car loads, per car.	Sheep, in car loads (in single deck only), per car.	Urea, base bullion, pig-lead, metal and crude sulphur, in car loads, per 100 pounds.	Hoop-poles, in car loads of 10 tons, and hay, in car loads, per car.
To Saint Louis .....	.60	.45	.30	.20	.20	.15	.40	.20	.33	.28	.19	\$50.00	\$30.00	.19	\$30.00
To Chicago .....	.75	.60	.45	.25	.25	.20	.50	.25	.45	.40	.25	67.50	45.00	.25	40.00

Question 46. Please to state the manner and extent to which Saint Louis rail rates are now affected by Missouri River rates (i. e., by boats), and also by rates made, or which may be made, by rail lines not embraced in the Southwestern Railway Association, even though such lines may be very indirect.

Answer. Neither the partial competition of the Missouri River boats nor that threatened by the indirect rail routes has induced the association to change the established rates. They are the same as were put into effect January 29, 1878.

Question 47. What apportionment scheme exists, or what arrangement in the nature of an apportionment exists between the Chicago and Northwestern, and the Chicago, Milwaukee and Saint Paul Railways?

Answer. By agreement between the Chicago, Milwaukee and Saint Paul, Chicago and Northwestern, and West Wisconsin Railways, made September 1, 1874, the through traffic, passenger and freight, which passes between Chicago and Milwaukee, on the one hand, and Saint Paul and Minneapolis, on the other, is divided, after the exception of 50 per cent. for the expense of carrying the same, on agreed proportions. The arrangement embraces through traffic only between the points named.

Subsequently, under date of October 1, 1877, a precisely similar arrangement was made between the Chicago and Northwestern, and the Chicago, Milwaukee and Saint Paul Companies, to cover the passenger and freight traffic passing between Chicago and Milwaukee, and La Crosse, Wis., and Winona, Minn. The rates of freight applied to the traffic so embraced are established at conventions of the general freight agents of the roads parties to the agreement. A secretary or auditor is placed in charge of the accounts; he compiles the statements of business, makes monthly settlements, keeps record of the rates established and of the proceedings of the conventions. The business is so naturally within the control of the respective roads, that all other matters pertaining to its conduct are disposed of at conferences between the managers.



APPENDIX No. 5.

SUPPLEMENTARY STATEMENTS PRESENTED BY MR. J. W. MIDGLEY, IN
REPLY TO INQUIRIES SUBMITTED TO HIM BY THE CHIEF OF THE BU-
REAU OF STATISTICS, UNDER DATE OF JUNE 21, 1879.

Question 1. Please to state the changes which have taken place as to the competi-
tion of Chicago and Saint Louis for the trade of the Missouri River points, and for
the trade of Colorado and New Mexico; and please also to state facts in regard to
changes which have taken place in the circumstances surrounding the railroads com-
peting for the traffic of the Missouri River points since the presentation of your former
report, dated July 10, 1878.

Answer. The report referred to contained a description of the Southwestern Rail-
way Association. The agreement between the parties thereto was to continue until
January 1, 1879. To prevent its expiration by limitation, a committee of five mana-
gers was appointed at the November meeting of the association to report measures
for the continuation of the association. That committee met on the 27th of Decem-
ber, and unanimously agreed to recommend a continuation of the association during
the year 1879. The main difficulty anticipated was the changed relations which would
be brought about by the completion of the Missouri extension of the Chicago and Al-
ton Railroad. Not only would that company then have a line of its own between
Chicago and Kansas City, but it would also be able to establish one between Saint
Louis and Kansas City. In that event the loss that would be inflicted upon the Saint
Louis, Kansas City and Northwestern, and Missouri Pacific Railways would be keenly
felt. The former road would be deprived of a share of the traffic between Missouri River
points and Chicago, and the two roads would be called upon to surrender a portion of
the business of Saint Louis to the new line. This, it was intimated, they were not will-
ing to do unless they were compensated by a share of the Chicago business. Meantime
reports had been published that when the Chicago and Alton got their line through
they would, in order to advertise their route, inaugurate a ruinous war of rates. These
suspicious and alarms confronted the committee. They were freely considered, and
to restore confidence they recommended "that, prior to March 15 ensuing, any new con-
ditions or circumstances of lines comprised within the association shall be taken into
account; and, in the event of failure to agree, the percentages which shall be allotted
to each division, or the question as to what lines shall comprise each division, shall be
submitted to three arbitrators, the method of selecting whom shall be agreed upon by
the association at the regular meeting of the association to be held in February next."

The recommendation was unanimously adopted by the association. The result was
regarded with satisfaction. It was thought that all danger of disagreement had been
averted by the distinct enunciation of the principle of arbitration. But the gratifica-
tion proved to be premature, for when the time arrived at which the method of arbi-
tration was to be determined the two Saint Louis roads objected to its immediate con-
sideration. A postponement for one month was agreed to, at which time no better
progress was made. On the contrary, one of the Saint Louis managers then announced
that his people would not consent to any method of arbitration. Effort was then made
to see if the anticipated claims of the Chicago and Alton could be amicably allowed.
No agreement was reached. An adjournment was then taken until the time when it
was thought the Chicago and Alton would be ready to open and operate their new
line. At that meeting, held in Chicago April 11, another committee was appointed
to consider the situation. The Saint Louis members declared their determination not to
accept any less than it had been receiving, viz, 45 per cent. of the gross tonnage of
the association. If, by reason of the admission of the Chicago and Alton, they sur-
rendered any portion of their Saint Louis business, they demanded that a sufficient
amount of the Chicago business be allowed them to compensate them for their loss of
Saint Louis tonnage. This suggestion the Chicago members would not entertain;
hence the committee were unable to agree. This fact they reported to the association,
and upon the refusal of the Saint Louis roads and the Wabash to continue longer in
the association, its existence was terminated on Saturday, April 12, 1879.

The same day the three Chicago roads—the Chicago and Alton, the Chicago, Bur-
lington and Quincy, the Chicago, Rock Island and Pacific, the Hannibal and Saint

Joseph, and the Kansas City, Saint Joseph and Council Bluffs Railroads combined and resolved to act unitedly during the war of rates which would inevitably follow. It was charged that the Saint Louis roads had been making contracts for freight. To defeat this action, rates between Chicago and the Missouri River, in both directions, were, on the following Monday, put down to ruinously low figures. At the same time the Chicago and Alton opened the war at Saint Louis by carrying freight between that city and Kansas City, in both directions, at "unprecedentedly low prices." These were continued until June 2, when rates were increased considerably, but still remained much below the tariff rates in force during the existence of the late association.

Question 2. Please to state the more important facts touching the changes which have taken place in the circumstances surrounding the railroads competing for the trade of Colorado and New Mexico since the presentation of your report dated July 10, 1878.

Answer. I think my report of July 10 closed with the statement that the Atchison, Topeka and Santa Fé Railroad had not only defeated the Denver and Rio Grande Railroad at the entrance to New Mexico, but had also gained an advantage in the struggle to locate a road through the Grand Cañon west of Pueblo, Col. This advantage the United States district court affirmed. The double defeat disabled the Denver and Rio Grande. Recognizing its defeat, the company executed a lease of its road to the Atchison, Topeka and Santa Fé Company on the 19th of October, 1878. Under this lease the Santa Fé Company took possession of and operated the Denver and Rio Grande up to June last. This move on the part of the Santa Fé gave it great prestige, for it completely shut out the Union Pacific and Kansas Pacific Railways from Southern Colorado and New Mexico, and enabled the Santa Fé to compel all that trade to pass over the Atchison, Topeka and Santa Fé Railroad. The decision of the district court denied the exclusive and prior right which the Denver and Rio Grande had claimed to build a road through the intricate passes of the Arkansas River. An appeal was taken to the Supreme Court of the United States, and, by agreement of parties, the cases were submitted to that court on written agreement, without waiting for the two or three years which would have been required to reach them in the regular order on the docket. They were, therefore, set for hearing in the last term of that court. The result was that the Supreme Court reversed the judgment and decrees of the lower court. They decided that the Denver and Rio Grande Company had the prior right to build a road through the Grand Cañon of the Arkansas River and sent their rescript or mandate to the lower court with instructions to reverse the decrees of the district court and enter decrees in conformity with the opinion of the Supreme Court.

This encouraged parties in the interest of the Denver and Rio Grande who had opposed the lease to the Santa Fé, to try and break it. With this intent the attorney-general of Colorado was induced to commence suit to invalidate the lease and restore possession of the road to the Denver and Rio Grande Company. The bill was filed in the district court of the State of Colorado for Costilla County—a point distant from all railroad communication. In accordance with the prayer of the bill, the court issued an injunction against the Santa Fé Company retaining possession of the road, and turning it over to the Rio Grande Company. Immediately, i. e., on the 11th of June, the Santa Fé company made application to the district court of the United States for the restitution of the road. Pending a hearing, the State court aforesaid placed the road in the hands of a receiver, and appointed as such receiver the solicitor of the Denver and Rio Grande Company, H. A. Risley. The case was then ordered transferred to the United States court, where it was hotly contested until July 14, when the court ordered the receiver dismissed and the road delivered again into the possession of the Atchison, Topeka and Santa Fé. Two days later the road was peaceably turned over to the Santa Fé direction. Immediately thereafter the Denver and Rio Grande Company petitioned the United States court to appoint a receiver. On July 24 the court decided the motion by appointing L. C. Ellsworth, of Denver, receiver of the Denver and Rio Grande Railroad. W. W. Borst, the superintendent under the Santa Fé management, was, by direction of the court, retained as superintendent.

Question 3. Are there now railroad bridges at Quincy, Hannibal, Louisiana, Saint Charles, Glasgow, Kansas City, Leavenworth, Atchison, and Saint Joseph, and at what other points south of Keokuk and Omaha and north of Saint Louis?

Answer. There are bridges at the points above named. I don't know of any other.

Question 4. What percentage of the grain shipped east from the Missouri River points is shipped direct to Atlantic seaports or to other points east of Saint Louis and Chicago?

Answer. I cannot tell; nor can any one, because the statistics are not kept.

Question 5. To what extent are grain and provisions shipped from Missouri River points or from points west of those points direct to Europe on through-bills of lading?

Answer. I cannot tell.

Question 6. What proportion of the Colorado business is now carried by the Union

Pacific, the Kansas Pacific, and the Atchison, Topeka and Santa Fé Railroads, respectively?

Answer. This information is not available to me.

Question 7. What proportion of the trade of the Missouri River points or passing through those points was, during the last year of the existence of the Southwestern Railway Association, with Chicago, Toledo, Saint Louis, and the Atlantic seaports respectively?

Answer. I cannot state this.

Question 8. If a railroad enters into a contract with a shipper for the carriage of all his freight at a fixed rate, can the railroad company compel him at law to a strict performance of the obligation entered into, even if other roads should afterwards outbid and offer to him the benefit of such lower rates than he had already contracted for? Has any such case ever been adjudicated, and with what result?

Answer. No such case has been adjudicated; but, as a matter of law, if the contract were clearly as stated, the railroad company could hold the shipper to a strict performance of it. Contracts, however, are not made in that way. They are usually given with a proviso that if a lower than the contract rate is offered, the party shall have the benefit of an equally favorable rate. This, in railroad parlance, is termed a contract "with protection."

Question 9. Are not time-contracts for the carriage of freights incompatible with an agreement as to the maintenance of rates under an apportionment scheme?

Answer. They are.

Question 10. To what extent did Missouri River rates influence rail rates between the Missouri River points and Saint Louis during the year 1878?

Answer. The barges made two or three trips, perhaps more, but the railroads did not reduce their rates in consequence. The effect of the barges, if there was any effect on the roads, was not apparent.

Question 11. Has the direct trade between the Missouri River points and the Atlantic seaports, especially New York City, exhibited an increase or decrease during the last two or three years?

Answer. Direct trade to the seaboard has increased, more especially of grain shipments to Baltimore, and meat or packing-house products to New York, for foreign exportation.

Question 12. What percentage of the east-bound traffic from the Missouri River points consists of grain and flour, and what percentage of provisions?

Answer. About 33 per cent. is wheat; 40 per cent. other grain; 1 per cent. flour; 3 per cent. provisions, and 14 per cent. live-stock, exclusive of sheep.

Question 13. In your report, dated July 10, 1878, you stated that the railroads extending west from Chicago and Saint Louis, and interested in the Missouri River traffic, had maintained the policy of not engaging in the wars of rates waged between the trunk-lines extending to the Atlantic seaports from those cities. Under the Southwestern Railroad Association that line of policy appears to have been maintained, and to have included in its operations the Hannibal and Saint Joseph Railroad; but your account of the action taken by that road and its eastern connection, the Wabash Railroad, leads me to believe that the maintenance of this policy was broken into somewhat when the Hannibal and Saint Joseph and Wabash combined, giving to Toledo a position with respect to the traffic of the Missouri River points similar to that sustained by Chicago and Saint Louis. The following inquiry has, therefore, suggested itself to me in this connection: Suppose that one of the eastern trunk-lines now terminating at Chicago should gain control of one of the lines extending from that city to the Missouri River points, would not that fact render it entirely impracticable for the remaining roads connecting Chicago and Saint Louis, respectively, with the Missouri River points, to sustain the policy of maintaining their rates independently of any warfare which might be carried on between the trunk-roads running east from Chicago and Saint Louis, respectively? And I would also ask you, generally, in this connection, if you do not think that any change of ownership of pooled lines naturally leads to the disruption of pools? The general inference which I draw from considerations of this character is, that all pooling arrangements occupy a position of unstable equilibrium. In other words, that any important change of circumstances may cause them to topple over, and, in the case of the establishment of new pooling arrangements, require that they shall be made upon an entirely new basis.

Answer. The idea expressed by your question is one that is very generally entertained. A few years ago it was assumed that, if Mr. Gould and his associates in the directory of the Union Pacific should secure control of the Chicago and Northwestern Railway, or the Chicago, Rock Island and Pacific, they would have no further interest in maintaining the Omaha pool between those two companies and the Chicago, Burlington and Quincy. It was supposed they might exclude the Burlington company from any participation in the overland traffic, hence that the pool would be dissolved. The Union Pacific party did enter the directory of the Northwestern, also that of the Rock Island road, but the fact did not injuriously affect the Chicago, Burlington and

Quincy, nor disturb the operations of the Omaha pool. Absolute ownership by the Union Pacific party of either one or two of the three roads named would not have changed the status of the pool. A plainer illustration may be furnished in the southwest; assuming that the Wabash Railway should absorb either of the two roads which extend from Saint Louis to the Missouri River. At first thought it would seem that the Wabash would then be in position to make any rate whatever between Toledo and the Missouri River, regardless of competitors. But this power it could not afford to exercise, nor would it be allowed to do it. Presuming that the Wabash should make a lower rate, the rival lines leading to the East would, in self-protection, join the other Western roads and establish equally low rates. In that event, the contest would be extended east of the Mississippi River, and might involve the roads through to the seaboard in a general war. For that reason common safety demands that the Mississippi River shall be made the dividing line beyond which the Eastern roads must not participate in making less than tariff rates. The wisdom of this requirement is so apparent that the mere ownership or control of a line beyond the Mississippi cannot subvert it. All roads must stand alike at the Mississippi River.

During the senseless war of the trunk-lines in May last, the rate on flour from Saint Louis to New York was said to have fallen so low as 8 cents per barrel, or 4 cents per 100 pounds. If that rate had been extended on a *pro rata* or proportionate basis to Kansas City, it would have allowed less than 2 cents per 100 pounds for the haul from the Missouri River to Saint Louis; whereas the lowest rate that was ever made in a fight between the trans-Mississippi roads has been 5 cents per 100 pounds from the Missouri to the Mississippi River. Ownership or control of a line west of the Mississippi River by one east thereof cannot, by the force of circumstances, greatly change the condition of things.

Question 14. Are the prevailing rates between the Missouri River points and the Atlantic seaboard now the same via Saint Louis, Hannibal, and Chicago, notwithstanding the disruption of the Southwestern Railroad Association?

Answer. From Missouri River points to the seaboard they are not. There is no effort or agreement to make them the same, nor any competent authority to require it. The roads west of Chicago and Saint Louis control the east-bound rates, and so long as those roads stand apart there is no assurance that rates will be the same via the several routes to the seaboard.

Question 15. Why was lumber excepted from the action of both the Missouri River apportionment schemes?

Answer. Lumber was excluded from the general pool because the shipments of that commodity from Saint Louis to the Missouri River are small in comparison with those from Chicago. In other words, Saint Louis is not distinctly a lumber market, while Chicago is shown to be foremost. In February last the Chicago, Saint Louis, and Hannibal roads submitted their earnings on the lumber traffic to the Missouri River points and beyond for the three years ending December 31, 1878, and it then appeared that the earnings from Saint Louis were only about 7½ per cent. of the entire amount. Lumber was not pooled because it was not keenly competitive. Chicago practically monopolized the business, and it was presumed could do so despite any efforts that might be made to divert the traffic to other points. In like manner there would be no use in pooling the oyster business of Baltimore with Boston or any other seaboard point at which the bivalve is not naturally abundant.

Question 16. Are the Chicago and Saint Louis roads now maintaining their agreed rates between Chicago and Missouri River points and Saint Louis and Missouri River points as they existed prior to the disruption of the pool in so far as relates to through business between Missouri River points and the Atlantic seaboard; or do they allow their agents in New York and other Atlantic seaports to make through rates upon the basis of the rates prevailing on the local Saint Louis and Chicago rates during the present contest?

Answer. The present rates from Chicago, Hannibal, and Saint Louis to Missouri River points, which are applied to seaboard business, are presumably the local rates from Saint Louis, but are somewhat higher from Chicago than the local rates on the lower classes from that city. They are agreed rates suggested by the executive committee of the trunk-lines, and make the same through rates via the several cities—Chicago, Hannibal, and Saint Louis.

Question 17. If the rates between Missouri River points and Atlantic seaports are now the same via Chicago, Hannibal, and Saint Louis, is this state of affairs secured by the act of these roads or by the act of Mr. Fink in his capacity as commissioner of the eastern trunk-lines?

Answer. As before stated the rates from Missouri River points to the seaboard are not the same via Chicago and Saint Louis, nor can they be made and maintained the same so long as the southwestern lines are at variance.

Question. At about what time were the Saint Louis rates to the Atlantic seaboard adjusted to the Chicago rates?

Answer. I have been unable to ascertain beyond question the precise time when

the rates from Saint Louis to the seaboard were first adjusted on the basis of Chicago rates. But my impression is that it was either on March 2, 1876, or April 13, 1876. On the day first named the trunk lines agreed "that the eastward through-freight rates and classifications as agreed to and issued by the lines leading east from Chicago should fix the minimum basis of through rates and classifications from western points, which rates should be made the same per mile to all Atlantic ports and eastern common points, via their respective short lines, as from Chicago to New York via the short lines."

On the 10th of March, 1876, notice of this agreement was sent by the trunk lines to their western connections, and the latter met in convention in Chicago, April 13, 1876, to consider the question. That convention agreed to adopt "the list of distances from common western points to New York, Philadelphia, and Baltimore agreed upon by the trunk lines, it being understood that those distances are made upon the shortest routes to the points named."

The percentage thus agreed upon made the Saint Louis rates 116 per cent. of Chicago rates. That rule has never since been changed so far as east-bound business is concerned.

Question. What agreement has existed as to the rates from the Atlantic seaboard to Chicago and Saint Louis and from those cities to the Atlantic sea-ports during the last three years? And in what manner and to what extent have such rates been influenced or controlled by the action of the railroad trunk-line pool over which Mr. Fink presides at New York?

Answer. As in the case just cited, the trunk-lines have exercised a kind of paternal control over their western connections. Thus, whenever the trunk-line presidents or managers have desired an advance in rates from Chicago or Saint Louis, they have expressed it, and the officers would promptly meet in Chicago and fix the rates as requested. The Saint Louis officers would also meet and fix their rates at 16 per cent. above the Chicago rates. This process has been pursued, because, in fact, the trunk-line presidents control most of the roads leading east from Chicago and Saint Louis. An expression from them, therefore, had the weight of a command. Since the existence of the New York compact, directed by Mr. Fink, these requests have originated generally with him, because he has jointly represented the trunk-lines.

Question. What percentage of difference between the Chicago and New York rates, to and from Atlantic sea-ports, appears to satisfy the railroad companies and these two cities, if any such expression has ever been obtained?

Answer. To my knowledge the Saint Louis roads have never asked for any percentage of difference except that which the shortest line would give them. Since the adoption of the 116 per cent. on east-bound freight, I have not heard of any complaint as to differences, either from the roads or people of Saint Louis. The complaint you have in mind applies to west-bound freight. For a long time that has been 122 per cent. of Chicago rates. This is based on a distance-table known as the "McGraham table," prepared by an employé of the New York Central. Last month the long dispute was compromised by an agreement to make the west-bound rate 119 per cent. of Chicago rates, thus "splitting the difference." You will need to correct your article in this respect. The complaint has been about west-bound business. In the article you refer to the pool formed October 1, 1878, and it might be inferred that this was the first one. Almost a year before, the lines from Saint Louis east organized under Commissioner Guilford's direction, and worked together for a few months. The year before that, i. e., 1876, the Saint Louis roads had a pool of their own. This was managed by C. W. Winslow, secretary. It dissolved in the winter of 1876-'77.

APPENDIX No. 6.

INFORMATION FURNISHED BY GEORGE H. MORGAN, ESQ., SECRETARY OF THE MERCHANTS' EXCHANGE, OF SAINT LOUIS, IN REGARD TO THE COMMERCIAL AND TRANSPORTATION INTERESTS OF THAT CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

Question 1. Please to present a schedule showing the roads which are considered by you as roads running north, as roads running south, as roads running east, and as roads running west from Saint Louis.

Answer. Railroads centering in Saint Louis:

West roads.

Missouri Pacific Railroad.
Saint Louis and San Francisco Railroad.
Saint Louis, Kansas City and Northern Railroad.*

South roads.

Saint Louis, Iron Mountain and Southern Railroad.
Missouri, Kansas and Texas Railroad.
Belleville and Southern Illinois Railroad.
Saint Louis and Southeastern Railroad.
Cairo and Saint Louis Railroad.

East roads.

Ohio and Mississippi Railroad.
Chicago, Alton and Saint Louis Railroad.
Indianapolis and Saint Louis Railroad.
Saint Louis, Vandalia, Terre Haute and Indianapolis Railroad.
Wabash Railroad.
Illinois and Saint Louis Railroad.

North roads.

Chicago, Burlington and Quincy Railroad, Saint Louis Division.

Question 2. Please to present tables similar to those on pages 105, 106, and 107 of the first report on internal commerce, continued to the year 1878.

Tons of freight received at Saint Louis from the North and of freight shipped from that city to the North, by river and by rail, from 1871 to 1878 inclusive.

	Received.		Shipped.		Total receipts and shipments.		Total.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	236, 827	60, 793	78, 967	14, 875	315, 854	75, 668	391, 522
1872	212, 584	120, 422	55, 235	23, 965	297, 819	144, 387	442, 206
1873	281, 175	72, 031	61, 966	18, 840	343, 141	90, 871	434, 012
1874	231, 360	137, 016	95, 800	20, 467	326, 860	157, 483	484, 343
1875	198, 100	88, 218	96, 225	26, 526	294, 325	114, 744	409, 069
1876	224, 860	100, 087	93, 360	35, 269	318, 220	135, 356	453, 576
1877	136, 715	96, 443*	68, 565	46, 262	205, 220	142, 705	347, 925
1878	174, 065	206, 563	67, 320	59, 221	241, 325	267, 844	509, 229

* The Saint Louis, Kansas City and Northern Railroad has a north branch running into Iowa. In making up the tonnage statements, I have divided the tonnage by this road, giving that portion from the Iowa line as northern tonnage.

Tons of freight received at Saint Louis from the South and of freight shipped from that city to the South, by river and by rail, from 1871 to 1878 inclusive.

	Received.		Shipped.		Total receipts and shipments.		Total tonnage.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	327, 262	782, 539	523, 505	172, 026	850, 767	954, 565	1, 805, 332
1872	308, 480	1, 083, 600	578, 596	257, 493	887, 078	1, 341, 093	2, 228, 169
1873	232, 460	1, 107, 928	562, 125	275, 998	794, 585	1, 383, 226	2, 177, 811
1874	176, 120	1, 020, 414	476, 735	291, 064	652, 855	1, 311, 498	1, 964, 353
1875	134, 465	1, 237, 205	370, 275	368, 357	504, 740	1, 605, 562	2, 110, 302
1876	159, 485	1, 151, 049	383, 485	313, 092	542, 970	1, 464, 141	2, 007, 111
1877	161, 570	1, 177, 779	427, 400	371, 402	589, 270	1, 549, 181	2, 138, 451
1878	187, 910	1, 102, 696	434, 490	397, 528	622, 400	1, 500, 224	2, 122, 624

Tons of freight received at Saint Louis from the East, and of freight shipped from that city to the East, by river and by rail, from 1871 to 1878 inclusive.

	Received.		Shipped.		Total receipts and shipments.		Total tonnage.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	247, 673	971, 572	123, 588	422, 048	371, 261	1, 393, 620	1, 764, 881
1872	225, 960	1, 055, 585	143, 915	544, 349	429, 875	1, 599, 934	2, 029, 809
1873	248, 790	1, 319, 929	131, 355	567, 693	380, 145	1, 887, 622	2, 267, 767
1874	220, 755	1, 259, 277	114, 400	631, 637	395, 155	1, 890, 914	2, 286, 069
1875	300, 800	1, 242, 066	147, 495	603, 032	448, 295	1, 845, 098	2, 293, 393
1876	254, 065	1, 255, 962	104, 030	922, 271	358, 085	2, 178, 233	2, 536, 318
1877	226, 255	1, 338, 605	78, 520	848, 928	374, 775	2, 187, 533	2, 562, 308
1878	296, 685	1, 473, 863	90, 400	1, 029, 006	367, 085	2, 502, 869	2, 869, 954

Tons of freight received at Saint Louis from the West and of freight shipped from that city to the West, by river and by rail, from 1871 to 1878 inclusive.

	Received.		Shipped.		Total receipts and shipments.		Total tonnage.
	By river.	By rail.	By river.	By rail.	By river.	By rail.	
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	72, 579	483, 417	44, 439	350, 933	117, 017	834, 350	951, 367
1872	26, 895	578, 757	27, 536	378, 857	54, 431	957, 614	1, 012, 045
1873	38, 630	745, 990	27, 810	292, 865	66, 440	1, 038, 875	1, 105, 315
1874	44, 830	748, 386	20, 380	287, 488	65, 220	1, 035, 874	1, 101, 094
1875	30, 160	665, 281	25, 100	303, 535	55, 260	968, 816	1, 024, 076
1876	50, 345	924, 122	19, 360	389, 318	69, 705	1, 313, 440	1, 383, 145
1877	49, 645	851, 561	23, 185	386, 258	72, 830	1, 237, 819	1, 310, 649
1878	56, 040	1, 000, 185	22, 463	394, 744	78, 505	1, 394, 929	1, 473, 434

Tons of freight received at and shipped from Saint Louis from each direction 1871 to 1878, inclusive.

	North.	East.	South.	West.	Total tonnage.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	391, 522	1, 764, 881	1, 805, 332	951, 367	4, 913, 102
1872	442, 206	2, 029, 809	2, 228, 169	1, 012, 045	5, 712, 229
1873	434, 012	2, 267, 767	2, 177, 811	1, 105, 315	5, 984, 905
1874	484, 343	2, 286, 069	1, 964, 353	1, 101, 094	5, 835, 859
1875	409, 069	2, 293, 393	2, 110, 302	1, 024, 076	5, 836, 840
1876	453, 576	2, 536, 318	2, 007, 111	1, 383, 145	6, 380, 150
1877	347, 965	2, 562, 308	2, 138, 451	1, 310, 649	6, 359, 393
1878	509, 229	2, 889, 954	2, 122, 624	1, 473, 434	6, 995, 241

Tons of freight received at and shipped from Saint Louis by river and by rail from 1871, to 1878, inclusive.

	By river.	By rail.	Total tonnage.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1871	1,654,899	3,258,903	4,913,802
1872	1,669,201	4,043,028	5,712,229
1873	1,524,311	4,400,594	5,924,905
1874	1,440,090	4,395,769	5,835,859
1875	1,302,630	4,534,220	5,836,850
1876	1,208,980	5,091,170	6,290,150
1877	1,242,155	5,117,238	6,359,393
1878	1,329,375	5,665,866	6,995,241

Question 3. Please to present data for the year 1878 in regard to freight shipped from Saint Louis by river and by rail similar to Table No. 2 of Appendix, p. 160 of first annual report on Internal Commerce.

Answer:

Actual tonnage of all classes of freight shipped from Saint Louis during the year 1878.

SHIPPED BY RAIL.

	Tons.	Per cent of total.
To the North	59,281	3.15
To the South	397,523	21.14
To the East	1,029,006	54.22
To the West	394,744	20.99
Total by rail	1,880,559	100.00

SHIPPED BY RIVER.

	Tons.	Per cent of total.
To the North	67,320	10.95
To the South	434,490	70.70
To the East	90,400	14.70
To the West	22,465	3.65
Total by river	614,675	100.00

	Tons.	Per cent of all shipments.
Total by rail	1,880,559	75.37
Total by river	614,675	24.63
Total shipped	2,495,234	100.00

TOTAL SHIPMENTS BY BOTH RIVER AND RAIL.

	Tons.	Per cent.
To the North	126,601	5.07
To the South	832,013	33.35
To the East	1,119,406	44.86
To the West	417,209	16.72
Total shipments	2,495,234	100.00

Question 4. Please to present such general and other statements as may occur to you showing the increase of the commerce of Saint Louis: 1st, with States lying north, viz, the States of Iowa and Minnesota; 2d, with the States of Nebraska, Kansas, and

Colorado; 3d, with the States of Arkansas, Louisiana, and Texas, and the Indian Territory; 4th, with the South Atlantic and the Gulf States east of the Mississippi River; and, 5th, with the Atlantic seaboard States and other States north of the Ohio River, and east of the Mississippi River. In replying to this question, please to state, not only the changes which have taken place in the commerce of Saint Louis with respect to these different sections, but also your view as to the circumstances which have produced such changes, and your opinion as to the probable future development of the commerce of Saint Louis with each one of the sections referred to.

Answer. It is impossible to make up statements showing the course of trade with different States. It can only be shown in a general way by the direction of receipts and shipments as given in the tables in answer to question 1. I might say, in a general way, that there has been no increase of any moment in the trade with Iowa and Minnesota; that there has been an increased business from the States west, and particularly so with the Southwestern States, *i. e.*, Texas and Arkansas. There has been no increase with the South Atlantic and Gulf States, but a perceptible increase in the volume of business with the Atlantic seaboard and New England and Middle States. There has been a large increase in the export trade via New Orleans, as will be shown in the answer to another question.

Question 5. Please to state such facts as will, in your opinion, best serve to illustrate the changes which have taken place in the passenger business on the Mississippi River above Saint Louis, and on the Missouri River. Also, such facts as, in your opinion, will best serve to illustrate the changes which have taken place in the passenger traffic on the Mississippi River below Saint Louis.

Answer. The passenger traffic on Western rivers has become an unimportant item in the trade. Since the completion of rail communication with the principal river towns, passengers take the rail as more expeditious and certain, and, as a rule, only local passengers travel on steamboats.

Question 6. Please to state such facts as, in your opinion, will best serve to illustrate the changes which have taken place in the freight business of the Mississippi River above Saint Louis, and on the Missouri River.

Answer. The principal change that has taken place in the freight business of the Upper Mississippi and Missouri rivers is, that there is a less quantity of freight carried than in early days. The traffic of the Upper Mississippi has been largely diverted by the east and west railroads crossing the river, while on the Missouri the business has been almost entirely taken from the river by the railroads running on either bank.

Question 7. Please to state such facts as, in your opinion, will best serve to illustrate the changes which have taken place in the freight traffic on the Mississippi River below Saint Louis.

Answer. The freight traffic on the Mississippi River below Saint Louis has improved in the past two or three years. The export business through New Orleans has been revived, and is assuming large proportions. Steamboats are again being run with more regularity and promptness, and the result is that much of the "coast" trade which had been diverted from Saint Louis is returning. I am of the opinion that the freight business on the lower river will be greater in the next year or two than at any time since the close of the war.

Question 8. Of the total tonnage shipped east by rail from Saint Louis during the year 1878, what percentage consisted of flour and grain, what percentage of provisions, and what percentage of live animals?

Answer. Total tonnage shipped east from Saint Louis, by rail, 1878, 1,029,006 tons.

Flour and grain shipped.....	377, 120 tons, or	36. 66 per cent.
Provisions shipped.....	23, 462 tons, or	2. 28 per cent.
Live-stock shipped.....	210, 108 tons, or	20. 41 per cent.
Other freight shipped.....	418, 316 tons, or	40. 65 per cent.
Total.....	1, 029, 006 tons.	100. 00 per cent.

There were also 90,400 tons shipped east by river.

Question 9. Of the total tonnage shipped to points south of Saint Louis during the year 1878, what percentage consisted of flour and grain, what percentage of provisions, and what percentage of live animals?

Answer. Total tonnage shipped south from Saint Louis, 1878, 832,018 tons.

Flour and grain shipped.....	317, 437 tons, or	38. 15 per cent.
Provisions shipped.....	28, 089 tons, or	3. 37 per cent.
Live-stock shipped.....	8, 442 tons, or	1. 02 per cent.
Other freight shipped.....	478, 050 tons, or	57. 46 per cent.
Total.....	832, 018 tons.	100. 00 per cent.

Question 10. Please to describe the trade of Saint Louis with Texas, presenting the general facts as to the nature of the freights received from that State and of the freights

shipped thereto, and, if it be possible, a statement showing the growth of the trade with Texas. This may be illustrated either by the total tonnage received and shipped, by the quantity of the principal commodities received and shipped, or in any other way which may best suit your convenience and fairly illustrate the subject.

Answer. The trade between Saint Louis and Texas has grown to large proportions, but there is no data to show the extent of the trade either in amount or value. The principal articles received from Texas are cotton, live-stock, and hides, while the shipments to Texas consist of every form of supplies, breadstuffs, provisions, and all kinds of general merchandise, and agricultural implements and other manufactures.

Question 11. Please to present such facts as will serve to illustrate the extent to which freight rates to and from points south of Saint Louis are regulated or controlled by competitive river rates, referring to the particular railroads running in competition with the Mississippi River.

Answer. Freight to and from points on the Mississippi River below Saint Louis are controlled by the steamboat and barge lines. The railroads make no effort to compete in rates, and consequently receive little or no freight for river towns and those adjacent and connected by local railroads. For instance, at the present writing, freights southward are :

On fourth-class freight.	By river.	By rail.
To Memphis	12½ cents per 100 pounds.	20 cents per 100 pounds.
To Vicksburgh	17½ do.	39 do.
To New Orleans.....	12½ do.	32 do.

And of course the river takes the freight. Railroad men acknowledge that they cannot compete with the river, and no matter what rates the roads might make, the boats would make a less rate and deliver the goods in nearly as good time. This state of affairs exists in the Southern trade, but does not hold good in other trades where the river and the railroads compete.

Question 12. Please to state any facts of importance indicative of changes which have taken place in the commerce of the Mississippi River south of Saint Louis since the year 1876.

Answer. The river business between Saint Louis and the Lower Mississippi has improved materially since 1876. Boats are now run with great regularity, which has again developed the local "coast" or order trade, and the foreign export trade has assumed large proportions. The tonnage shipped south by river has increased from 333,485 tons in 1876, to 427,400 tons in 1877, and 434,490 tons in 1878. The business of 1878 would have shown a very large increase had it not been for the yellow-fever epidemic, which completely suspended the river traffic for nearly two months. Shipments of grain in bulk, for export, were as follows :

Shipments of bulk grain from Saint Louis to New Orleans during 1878.

Date.	Boat.	Wheat.	Corn.	Oats.	Rye.
		Bushels.	Bushels.	Bushels.	Bushels.
1878.					
Jan. 5	My Choice and barges		87, 120		
6	Means and barges	29, 537	23, 296		
13	Whale and barges		10, 000		
21	Future City and barges		141, 465		
24	Baker and barges	35, 000	71, 400		22, 000
25	Gilmore and barges		60, 355		21, 214
Feb. 2	Warner and barges	50, 522	63, 974		
2	My Choice and barges	30, 447	92, 219		
7	Port Eads and barges		94, 000		
14	Future City and barges		91, 540		25, 210
18	Means and barges		50, 220		19, 555
20	Gilmore and barges		100, 570		
March 9	Future City and barges				30, 220
20	Means and barges		70, 000		
26	Future City and barges				21, 350
30	Port Eads and barges				30, 000
April 5	Warner and barges	40, 500	91, 002		22, 284
6	Gilmore and barges	60, 002	34, 471		
14	Future City and barges		22, 126		33, 351
21	Port Eads and barges	30, 112	101, 676		25, 083
26	My Choice and barges	34, 040	50, 000		51, 512
May 5	Dippold and barges		152, 500		
10	Means and barges	26, 507	69, 156		
11	Future City and barges	32, 312	82, 053		61, 000
18	Port Eads and barges	25, 496	50, 117		21, 403
26	Gilmore and barges		77, 999		
June 2	Dippold and barges		54, 178		
10	Port Eads and barges		63, 704		30, 390
16	Gilmore and barges		25, 000		21, 494

Shipment of bulk grain from Saint Louis to New Orleans during 1878—Continued.

Date.	Boat.	Wheat.	Corn.	Oats.	Rye.
		<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1878.					
June 22	Dippold and barges				11,000
July 2	Port Eads and barges		20,000		
9	Gilmore and barges		60,726		
15	Grand Lake and barges		35,800		
22	Gilmore and barges	25,216	9,473		
29	Grand Lake and barges		24,400		
Aug. 5	Port Eads and barges	75,141	25,000		
13	Gilmore and barges	25,005	30,000	30,000	
19	Grand Lake and barges	53,073	25,500		
23	Dippold and barges	85,500	50,173		
31	Future City and barges	51,222	26,186		
Sept. 10	Gilmore and barges	75,000	27,000		
22	Port Eads and barges	24,740			
27	Means and barges	45,000	50,000	25,000	
Oct. 3	Gilmore and barges	31,000			
7	Port Eads and barges	25,000	59,545		
17	Future City and barges	44,983	20,022		25,007
18	Baker and barges		65,000	25,010	
23	Grand Lake and barges	45,000	59,000		
31	Port Eads and barges	39,512	18,000		25,827
Nov. 8	Future City and barges	88,819			
9	Baker and barges	20,000	40,511	28,857	
14	Gilmore and barges	72,446			20,099
17	Iron Mountain and barges	50,079			
20	Port Eads and barges	76,000	16,000		20,000
29	Future City and barges	43,057	61,500		20,306
Dec. 1	Jno. Means and barges	£2,000	46,000		
4	Jno. Dippold and barges	79,000	36,500		
9	Jno. Gilmore and barges	£4,102	15,000		23,000
14	Grand Lake and barges	56,419	48,756		21,328
14	E. M. Norton and barges	26,200	74,500		
24	By rail to Cairo	35,000			
Total bushels		1,276,638	2,257,056	108,867	609,041

Question 13. Please to state the quantity of grain shipped south from Saint Louis during the last year; first, by river, and, second, by rail.

Answer:

Grain shipped southward during 1878; that is, in all directions south.

	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>
By rail	228,451	363,305	364,114	26,528	71,223
By river	1,597,999	3,383,541	1,323,628	622,490	2,764
Total	2,126,450	3,746,846	1,687,742	649,018	74,587

	<i>Bush.</i>
By rail	1,054,221
By river	7,230,422
Total	8,284,643

Question 14. To what commodities are the boats and barges chiefly confined in their traffic on the Upper Mississippi and Missouri rivers, and on the Lower Mississippi River? And in this connection please to state any changes which appear to be taking place as to the transportation of different commodities by river and by rail.

Answer. The commodities chiefly transported on the Western rivers continue to be confined to the products of the soil and heavy fourth-class freight, while general merchandise goes by rail. The following tables show the articles transported by the Southern boats:

APPENDIX.

Shipments by New Orleans boats for 1878, and comparative for seven years.

Year.	Corn.										Oats.								
	Apples, barrels.	Ale and beer, packages.	Bagging, pieces.	Barley, sacks.	Butter, pounds.	Bran, sacks.	Cattle, head.	Sacks.	Bushels.	Cornmeal, barrels.	Cotton, bales.	Eggs, packages.	Flour, barrels.	Hay, bales.	Horses and mules, head.	Hogs, head.	Malt, sacks.	Sacks.	Bushels.
1878	3,541	11,324	26,986	1,152	255,105	68,709	367	141,706	2,857,056	114,869	8	1,327	340,615	98,985	1,736	116	22,719	216,777	108,867
1877	4,950	17,461	14,518	2,5	66,652	69,652	679	100,839	3,576,057	139,472	1,738	1,325	344,152	52,752	1,520	168	19,035	152,788	...
1876	5,625	8,712	14,234	2,5	69,579	69,579	790	257,098	1,737,237	137,984	6,430	1,322	452,011	63,873	2,451	120	19,277	272,371	...
1875	4,273	...	11,367	1,719	...	75,104	1,216	290,644	1,724,817	137,400	730	1,898	505,111	74,106	1,780	1,112	20,260	284,971	...
1874	10,402	...	5,527	1,637	...	105,379	1,610	449,635	1,047,794	169,546	2,992	4,825	762,324	56,873	3,404	5,803	28,863	404,281	...
1873	9,207	...	9,324	1,302	...	142,865	4,810	423,683	1,373,969	112,409	...	8,153	725,180	87,658	...	7,147	38,194	430,202	...
1872	34,265	...	12,219	3,917	...	144,885	3,734	606,534	1,711,039	91,898	...	11,255	723,770	83,936	...	8,303	27,533	461,982	...
1871	45,908	...	12,300	3,724	...	132,249	651	631,716	309,077	69,744	...	7,847	935,517	45,290	...	7,307	19,768	371,981	...

Year.	Pork product.				Rye.		Tobacco.		Wheat.		Whisky, barrels.		White lead, packages.	Sundries, packages.	Tons.
	Pork, barrels.	Hams, pounds.	Meats, pounds.	Lard, pounds.	Sacks.	Bushels.	Hogsheads.	Packages.	Sacks.	Bushels.					
1878	50,753	1,118,455	10,866,607	6,562,732	4,612	609,041	75	1,286,687	19,995	1,841,639	4,436	12,718	213,054	392,365	
1877	1,740	8,651,893	6,840,863	6,870	8,450	171,843	86	4,000	3,421	351,433	4,317	17,459	153,683	390,445	
1876	1,669	10,794,016	3,817,515	3,817,515	2,306	171,843	407	179,600	57	37,142	6,944	14,765	183,107	227,415	
1875	1,729	9,808,964	3,817,407	14,067	2,367	...	462	...	67	135,981	7,621	266,739	199,690	...	
1874	4,674	20,081,890	6,500,350	9,394,130	8,383	349	1,062	...	2,077	365,528	7,614	...	270,080	392,345	
1873	3,025	28,108,200	9,394,130	27,761	19,258	1,035	979	...	1,358	...	10,434	...	280,453	392,915	
1872	17,176	24,147,840	12,413,380	37,717	13,353	1,969	598	...	1,553	...	12,194	...	313,041	392,831	
1871	10,304	21,000,900	11,346,900	51,506	13,367	3,914	310	...	1,353	...	8,769	...	393,659	392,708	

Question 15. Please to present any facts of interest which may occur to you, as to the direct shipment of domestic produce from Saint Louis to points in Europe, both by the way of New Orleans and by the way of the four principal Atlantic seaports, viz, Boston, New York, Philadelphia, and Baltimore.

Answer. In one branch of commerce, namely, the foreign export trade, our city has made rapid strides. The following table shows the amount exported by rail through Atlantic ports to foreign countries during the year:

Foreign rail shipments from Saint Louis during 1878.

To—	Cotton.	Tobacco.	Flour.	Meats.	Lard.	Tallow and grease.	Wheat.
	<i>Bales.</i>	<i>Hhds.</i>	<i>Barrels.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Bushels.</i>
Liverpool, England.....	121, 148	4, 107	96, 996	2, 493, 740	581, 130	227, 740	11, 266
London, England.....		1, 341	16, 387	76, 875		10, 060	
Hull, England.....			400				
Bath, England.....			1, 540				
Bristol, England.....		415	105	109, 600		221, 135	
West Hartlepool, England.....			500				
Havre, France.....	4, 237		115	300, 347			
Paris, France.....			500				
Glasgow, Scotland.....		203	67, 348	4, 500	33, 000		
Leith, Scotland.....		171	1, 500				
Londonderry, Ireland.....			1, 224				
Belfast, Ireland.....			25, 223				4, 922
Dublin, Ireland.....			800				
Bremen, Germany.....	1, 055	52	10	253, 436	29, 700		
Stuttgart, Germany.....				59, 545	33, 000		
Hamburg, Germany.....	1, 510	77		101, 000			
Cuxhaven, Germany.....				1, 433			
Manheim, Germany.....				271, 036			
Genoa, Italy.....	1, 201						
Antwerp, Belgium.....	550	831	13, 645	2, 297, 645	330, 000		
Rotterdam, Holland.....			1, 700	92, 695	33, 000		
Amsterdam, Holland.....			585				
Other European ports.....				315, 307			
Rio de Janeiro, Brazil.....			27, 300				
North American ports.....		196	9, 190	695, 854			
To New York for export.....	100	28	700	1, 649, 711			
Total.....	129, 821	7, 349	265, 968	8, 613, 706	1, 039, 830	480, 935	16, 182

In addition to the above list of principal articles there were exported to various European ports: 10 barrels pork, 10,853 pounds potash, 1,687 cases canned beef, 26 barrels whisky, 50 cases castor oil, 385 bales and 14,120 pounds hair, 48,000 pounds walnut lumber, 183,200 pounds oil-cake, 185,784 pounds feathers, 87,118 pounds hides, 22,000 pounds dried apples, 23,000 pounds bone-black, 20 barrels cornmeal, 67 sacks grass-seed, 2,800 bushels rye, 297,800 pounds bran and mill-feed, and 3,407,644 pounds sundries.

The export trade via New Orleans, so auspiciously revived during the autumn of 1877, has more than realized the expectations of all, and verified the prediction made in my last report of a large increase in this movement. There has been a steady flow of shipments during each month of the year, and the total movement reached nearly five and one-half million bushels, an increase over the preceding year of nearly one million and a half.

The increase in this movement is shown by the following table:

Shipments of bulk grain from Saint Louis to New Orleans, for nine years.

	Wheat.	Corn.	Rye.	Oats.	Totals.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	
1878.....	1, 876, 639	2, 837, 056	609, 041	102, 087	5, 424, 823
1877.....	351, 453	3, 578, 057	171, 843		4, 101, 353
1876.....	37, 142	1, 737, 277			1, 774, 419
1875.....	125, 961	1, 721, 617			308, 578
1874.....	365, 252	1, 047, 794		10, 000	1, 423, 046
1873.....		1, 373, 969			1, 373, 969
1872.....		1, 711, 039			1, 711, 039
1871.....		309, 077		3, 000	312, 077
1870.....	66, 000				66, 000

In this connection the foreign shipments of bulk grain from New Orleans are given. The *total* shipments are given as showing the increase in this direction, and while the aggregate of the shipments exceeds the amount shipped from Saint Louis, with the exception of corn, the balance came from our city, and probably the most of the corn, although the bulk shipments by barges were but a little more than one-half of the total exports.

In addition to the bulk grain shipped, 7,100 barrels flour were sent by this route to Antwerp.

Exports of bulk grain from New Orleans during 1878.

To—	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>
Belgium	222, 865	290, 669		4, 045	
France	456, 652	1, 815, 222	30, 261		
Germany	231	280, 575		170, 381	
England	453, 483	2, 322, 866			
Ireland	163, 118	49, 700			
Netherlands	329, 727	125, 754		370, 046	
Mexico		43, 720			
Spain	46, 442	23, 074		19, 995	
Italy		56, 721			
West Indies		247			
British Honduras		94	120		
Cuba		22, 617	2, 770		
Central American States		3, 201	249		
Total	1, 672, 518	5, 043, 460	33, 400	564, 467	

Comparing the figures of our export trade of the past year with those of 1875, we see to what large proportions this branch of trade has grown:

Foreign shipments from Saint Louis by rail.

To—	1878.	1875.	To—	1878.	1875.
	<i>Tons.</i>	<i>Tons.</i>		<i>Tons.</i>	<i>Tons.</i>
England	50, 740	15, 107	Holland	335	
Scotland	6, 935	530	Other European ports	70	2
Ireland	2, 970		South American ports	2, 730	
Germany	1, 190	934	North American ports	1, 395	
France	210	252	To New York for export	1, 721	
Italy	300		Total tons	72, 091	16, 825
Belgium	3, 495		Via New Orleans to Europe	154, 060	6, 857
Total tons			Total tons	226, 151	23, 682

Question 16. Please to present such facts as may occur to you going to show the extent to which the prices of wheat and corn at Saint Louis are affected by the prices which prevail at New Orleans, and to what extent these latter prices are affected by fluctuations in the demand for grain freights at that point.

Answer. Prices of wheat and corn at Saint Louis are not governed to any extent by the prices which prevail at New Orleans, but rather by those of Chicago, Toledo, and New York and other home markets. The export trade via New Orleans is of course governed to some extent by ocean freights, as the ability to ship on a margin for profit depends on the cost of transportation.

Question 17. Please to describe the operation of the pooling or apportionment scheme which exists for the division of the traffic from Saint Louis eastward, between the various lines, stating what proportion is accorded to each line, and in the same connection the rates which have prevailed between Saint Louis and the East, and how such rates have affected the interests of Saint Louis, in competition with those from Chicago to the Atlantic seaboard States.

Answer. About the 1st of October, 1878, the five eastern roads, viz, the Ohio and Mississippi, the Vandalia, the Wabash, the Indianapolis and Saint Louis, and the Chicago and Alton, entered into a combination or pool on all business going east of Buffalo, each road to have an equal proportion, i. e., 20 per cent., and an agreed schedule of rates was to be strictly adhered to. Either road receiving a greater proportion than 20 per cent. was to turn over freight to the roads in arrears until each road received its proper proportion. The rates as given in the following table were generally maintained, although at times rates were cut to meet cuts at other points.

All-rail freights eastward from East Saint Louis during the year 1878, in cents per 100 pounds.

	To Boston and New England points.				To New York.				To Philadelphia.				To Baltimore.				To Pittsburgh and Wheeling.				To Cincinnati.					
	Fourth class, per 100 pounds.	Flour, per barrel.	Grain, per 100 pounds.	Boxed meats, per 100 pounds.	Bulk meats, per 100 pounds.	Fourth class, per 100 pounds.	Flour, per barrel.	Grain, per 100 pounds.	Boxed meats, per 100 pounds.	Bulk meats, per 100 pounds.	Fourth class, per 100 pounds.	Flour, per barrel.	Grain, per 100 pounds.	Boxed meats, per 100 pounds.	Bulk meats, per 100 pounds.	Fourth class, per 100 pounds.	Flour, per barrel.	Grain, per 100 pounds.	Boxed meats, per 100 pounds.	Bulk meats, per 100 pounds.	Fourth class, per 100 pounds.	Flour, per barrel.	Grain, per 100 pounds.	Boxed meats, per 100 pounds.	Bulk meats, per 100 pounds.	
1878.																										
January 1 to March 11.....	51	102	51	56	61	46	92	46	51	56	44	43	43	43	43	43	31	62	31	31	36	16	32	16	31	21
March 11 to April 1.....	40	80	40	45	50	35	70	35	40	45	33	32	32	32	32	32	28	56	28	28	33	16	32	16	21	
April 1 to April 9.....	40	68	34	40	45	35	58	35	34	33	32	32	32	32	32	32	25	50	25	25	30	16	32	16	21	
April 9 to May 6.....	40	68	34	40	45	35	58	35	34	33	32	32	32	32	32	32	25	50	25	25	30	16	32	16	21	
May 6 to August 5.....	34	56	28	34	39	27	42	27	29	27	27	27	27	27	27	27	18	36	18	18	24	16	32	16	21	
August 5 to August 20.....	40	68	34	40	45	35	58	35	40	33	32	32	32	32	32	32	25	50	25	25	30	16	32	16	21	
August 20 to September 2.....	40	68	34	40	45	35	58	35	40	33	32	32	32	32	32	32	25	50	25	25	30	16	32	16	21	
September 2 to November 25.....	46	80	40	45	51	41	70	35	46	39	66	33	33	33	33	33	25	50	25	25	30	16	32	16	21	
November 25 to December 31.....	51	102	51	56	61	46	92	46	51	56	44	43	43	43	43	43	31	62	31	31	36	16	32	16	21	

All-rail freights on live stock, in cents per 100 pounds, from East Saint Louis.

January 1 to September 2: To Boston and New England points, 70; to New York, 65; to Philadelphia, 63; to Baltimore, 62; to Pittsburgh and Wheeling, 37½; to Cincinnati, 29.
 September 2 to December 31: To Boston and New England points, 70; to New York, 66; to Philadelphia, 63; to Baltimore, 62; to Pittsburgh and Wheeling, 37½; to Cincinnati, 29.

The pool never worked harmoniously, but was continued until about April 1, 1879, when it was dissolved. Business men generally claimed that the pool was an injury to the trade of Saint Louis, preventing competition, and, by maintaining schedule rates, discriminating against Saint Louis at times to the advantage of Chicago and other competing points.

Question 18. Please to state such facts as will indicate the growth of the cotton traffic of Saint Louis, giving both receipts and shipments, and presenting tables showing the growth of the cotton traffic over the various routes during the last five or six years. In this connection please also to give the States and localities in which the cotton received by the different routes is produced.

Answer :

COTTON.

Receipts and shipments at Saint Louis.

Cotton year.	Gross receipts.	Through shipments.	Net receipts.	Gross shipments.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1877-'78	245,856	61,561	187,295	240,604
1876-'77	217,734	69,258	148,476	212,835
1875-'76	244,598	84,788	159,810	235,462
1874-'75	133,969	39,679	94,290	124,640
1873-'74	103,741	34,323	79,418	92,218
1872-'73	59,709	25,494	34,215	51,795
1871-'72	36,421	19,715	16,706	32,048

Statement showing the receipts of cotton by each route for seven years.

By—	1877-'78.	1876-'77.	1875-'76.	1874-'75.	1873-'74.	1872-'73.	1871-'72.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
Saint Louis, Iron Mountain and Southern Railroad	223,194	197,007	191,162	101,263	53,980	11,830	4,039
Missouri, Kansas and Texas Railroad	8,097	9,270	29,801	16,969	17,816	17,223	34
Saint Louis and San Francisco Railroad	5,209	3,842	3,507	3,499	3,759	3,759	1,942
By boats from lower rivers	9,998	6,630	19,603	11,683	27,317	26,372	24,626
By other routes	358	965	525	1,250	849	525	1,750
Total	248,856	217,734	244,598	133,969	103,741	59,709	36,421

Foreign shipments of cotton from Saint Louis for the year ending December 31, 1878.

	<i>Bales.</i>
To Liverpool	121,148
To Hamburg	1,510
To Havre	4,257
To Genoa	1,201
To Bremen	1,055
To Antwerp	550
To New York for export	100
Total	129,821

The bulk of the cotton received at Saint Louis is from Texas, Arkansas, and Indian Territory, the greater proportion represented being from Texas. This covers receipts by Iron Mountain, Missouri, Kansas and Texas, and San Francisco Railroads. The receipts by boats are from the States bordering on the Mississippi above Vicksburg, probably mostly from Tennessee and Arkansas.

Question 19. Please to state the rates per bale for the transportation of cotton from Dallas, Tex., to New York and to Boston, respectively; first, by Galveston and the sea; and, second, by all-rail routes, either via Saint Louis or by any other all-rail route.

Answer :

Rate of freight from Dallas, Tex., via Galveston and the sea.

To New York, on cotton	\$5.65 per bale.
To Boston, on cotton	5.90 per bale.

Rate of freight from Dallas, Tex., all rail, via Saint Louis.

On cotton, to New York	\$6.02 per bale.
On cotton, to Boston	6.27 per bale.

The rate all rail is \$1.23 to New York and \$1.28 to Boston per 100 pounds. Taking the average weight per bale of Saint Louis receipts, viz, 490 pounds per bale, gives the all-rail rates per bale as stated above.

Question 20. Please to present a table showing the increase in the receipts of cotton at Saint Louis from 1866 to 1878, inclusive.

Answer:

Receipts of cotton at Saint Louis, by river and by rail, during the past thirteen years.

Year ending August 31.	Received by river.	Received by rail.	Total bales received.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1866	53,506	1,931	55,437
1867	18,712	1,066	19,778
1868	38,804	220	39,024
1869	16,614	82	16,696
1870	17,034	1,484	18,518
1871	15,582	4,688	20,270
1872	30,018	6,403	36,421
1873	26,577	33,132	59,709
1874	27,538	76,303	103,841
1875	11,750	132,219	133,969
1876	19,620	204,978	224,598
1877	6,650	211,044	217,734
1878	9,998	232,858	242,856

Question 21. Please to mention the advantages afforded by Saint Louis as a cotton market.

Answer. The advantages possessed by Saint Louis as a cotton market are presented by Mr. C. W. Simmons, secretary of the Saint Louis Cotton Exchange, as follows:

1st. From the fact that she is in a direct line from Arkansas and Texas to the east and Liverpool.

2d. As the country merchants control the cotton, they save exchange by shipping to where they buy.

3d. Saint Louis is the best point from which the planters and merchants can draw their supplies.

4th. Saint Louis is above the yellow-fever line, and the trade can be conducted the year round.

5th. The cotton produced by the above States is of the best quality, thus making our market desirable for spinners and buyers.

6th. Our market, under its system of warehousing, can and does handle cotton cheaper than other markets.

7th. Our railroad facilities are better than any other cotton market.

8th. Our purchasers are the North, East, Liverpool, and home.

Question 22. Please to describe, as nearly as you can, the limits of the winter-wheat producing region.

Answer. The winter-wheat belt extends from a line running east and west on a line with the northern boundary of the State of Missouri, extending southward as far as wheat is grown. The principal supply is from west of the river, from the States of Missouri, Kansas, and the southern line of counties of Nebraska. From the east of the river the supply comes from Illinois, Ohio, Indiana, Tennessee, and Kentucky. I inclose a map which gives an imperfect idea of the wheat-producing regions of the West. The darkest shade represents the region of greatest fertility, so that it will appear that Saint Louis is the center of the winter-wheat belt.

Question 23. What circumstances, other than those of a geographical nature, cause Saint Louis to be the principal or favored winter-wheat market?

Answer. Saint Louis being the only large city in the heart of the winter-wheat belt, became naturally the market for this kind of wheat. As a natural consequence, Saint Louis became, and is now, the largest manufacturer of flour in the United States, producing last year nearly two million barrels. For many years Saint Louis flour stood highest in the markets of the world, and consequently our millers were able to pay the highest prices for wheat. Although by the "new process" spring-wheat flour now runs as high sometimes as our winters, still Saint Louis has a world-wide reputation for her flour, and, consequently, continues to demand, for milling purposes, a large

proportion of the winter-wheat crop. Of late years there has been developed a shipping demand, which takes all not wanted for manufacturing purposes.

Question 24. Please to present a table showing the increase or population and the increase in the value of the taxable property of Saint Louis.

Answer:

Population of Saint Louis.

1799.....	925	1856.....	125,200
1810.....	1,400	1859.....	185,587
1820.....	4,928	1866.....	204,327
1828.....	5,000	1870 (United States Census).....	310,864
1830.....	5,862	1871 (estimated).....	350,000
1833.....	6,397	1872 (estimated).....	400,000
1835.....	8,316	1873.....	428,126
1837.....	12,040	1874 (estimated).....	450,000
1840.....	16,469	1875 (estimated).....	495,000
1844.....	34,140	1877 (estimated, City Directory).....	501,489
1850.....	74,439	1878 (estimated, City Directory).....	503,685
1852.....	94,000		

Amount of real estate and personal property assessed in the city of Saint Louis.

Year.	City of Saint Louis.		Rate of taxation.	
	Real estate.	Real and personal.	Old limits.	New limits.
1859.....	\$69,846,845		2.21½	
1860.....	73,763,670		2.56½	
1861.....	57,537,415		2.40	
1863.....	40,240,450		2.57	
1863.....	49,409,030		2.42	
1864.....	53,205,820	\$63,059,078	2.60	
1865.....	73,960,700	87,625,534	2.76½	
1866.....	81,961,610	105,245,210	3.00	
1867.....	86,625,600	112,907,660	2.95	
1868.....	94,362,370	116,582,140	2.85	
1869.....	113,626,410	138,523,480	2.85	
1870.....	119,080,800	147,969,660		
1871.....	123,833,950	158,272,430	2.80	
1872.....	129,235,180	168,689,570	2.78	
1873.....	149,144,400	180,278,950	2.76	
1874.....	141,041,480	172,109,270	2.88.5	
1875.....	131,141,020	166,999,660	3.48.5	
1876.....	132,785,450	166,441,110	3.42.5	
1877.....	148,012,750	181,345,560	2.80	
1878.....	140,976,540	172,829,980	2.60	1.35

The valuation in old and new limits for 1878 was as follows:

	Real estate.	Real and personal.
Old limits.....	\$127,392,760	\$158,149,850
New limits.....	13,583,780	14,680,130

APPENDIX No. 7.

INFORMATION IN REGARD TO THE COMMERCIAL AND TRANSPORTATION INTERESTS OF SAINT LOUIS FURNISHED BY MR. GEO. H. MORGAN, SECRETARY OF SAINT LOUIS MERCHANTS' EXCHANGE, UNDER DATE OF JUNE 6, 1879. IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS.

Question 1. Is it not generally true that provisions and live animals destined for Europe are shipped East, and that grain destined for Europe is shipped South? This seems to be the indication of your statistics, but I should judge that the grain must be going East just at this time, as I see it stated that in the war of rates flour is being shipped East at eight cents a barrel and car-loads of meat at five cents per 100 pounds.

Answer. It is generally the case that all articles destined for Europe, with the exception of grain, are shipped to the Atlantic cities. This will be seen by reference to my annual report, pages 12 and 13. I mean to say that the grain shipped by our own dealers for foreign account goes to New Orleans. Of course a portion of the grain shipments eastward is exported, but the venture of the Saint Louis shipper is only to the seaboard. Just at this present writing the export trade via New Orleans is at a stand-still for two reasons: 1st, the quarantine regulations at New Orleans are driving off the shipping, as vessels will not submit to a three weeks' quarantine; 2d, the low rail rates to the East are drawing the trade to the Atlantic cities, although the shipments are not heavy. This low rate, however, is over, as we are notified to-day that the tariff will be established again on the 9th of this month.

Question 2. Why should cotton go from Texas to New York via Saint Louis, while the rate via Galveston is, as you say, lower? For instance, you give me the rate from Dallas via Galveston to New York, \$5.65 per bale, and via Saint Louis \$6.02 per bale.

Answer. Cotton goes to the eastern manufactories and to New York from Texas via Saint Louis by rail from certain localities for the reason that the rate, including insurance, is as low as via Galveston and the time less. Take, for example, the rate quoted from Dallas via Galveston, \$5.65 per bale, and add 1 per cent. insurance, say 40 cents, = \$6.05 per bale, about the same as the rail rate of \$6.02. The Iron Mountain Railroad has brought from Dallas some 30,000 bales of cotton during the past nine months for eastern shipment.

Question 3. A table has been prepared from the official records of the office showing the exports of the five principal products of the Northwest from New Orleans, viz, Indian corn, wheat, wheat-flour, bacon and hams, and pork. I notice that Indian corn increased from 508,000 bushels, in 1871, to 5,764,000 bushels, in 1878; wheat increased from 18,000 bushels, in 1871, to 839,000 bushels, in 1878; wheat-flour fell off from 163,000 barrels, in 1871, to 38,000 barrels, in 1878; bacon and hams increased from 183,000 pounds, in 1871, to 288,000 pounds, in 1878, and pork decreased from 248,000 pounds, in 1871, to 138,000 pounds, in 1878. Am I safe in saying that almost all of this reached New Orleans from Saint Louis, and that it illustrates the export trade of Saint Louis via New Orleans?

Answer. I give on page 13 of my report of 1878 a table of shipments of grain from New Orleans, which was furnished me by the collector of the port of New Orleans; these figures, as you will see, differ somewhat from yours. My report is:

Shipments of wheat from New Orleans in 1878.....	1,672,518
Shipments of corn	5,043,460
Shipments of oats	33,400
Shipments of rye	564,467

I have no record of the shipments of 1871, and say in my report this may nearly all be considered Saint Louis business, as by reference to page 55 you will see that the bulk shipments from Saint Louis exceed, with the exception of corn, the shipments from New Orleans. Some corn is shipped from points below Saint Louis and above Cairo by Saint Louis dealers, which does not show in our tables, and a considerable amount goes to New Orleans in sacks, and of course some goes from Cairo and points on the Ohio River.

Question 4. Can you give me any statistics showing the growth of the total grain movement toward the East since 1871? If the only way is to compile it from your annual statement of grain movements, such as that presented on page 37 of your re-

port for 1878, I can have the compilation made here. From the second statement on page 51 I can compile the growth of the movement of flour towards the East.

Answer. I can only give you statements of the eastern movement from tables such as presented on page 37 of my report of '78 (you will find a similar table in every report), and from the tonnage table on page 35.

Question 5. Of the total grain shipped East from Saint Louis, about what percentage do you think reaches the seaboard cities, and what percentage is exported?

Answer. I have no data from which to answer this question, but my best opinion is that nearly all the grain shipped East from Saint Louis goes to the seaboard. What becomes of it there I cannot say.

Question 6. Does the Saint Louis, Iron Mountain and Southern Railroad make cotton rates in the interest of Saint Louis?

Answer. The Saint Louis, Iron Mountain and Southern Railroad is pre-eminently a Saint Louis road; the large increase in the cotton business is largely due to the fact that this road has from the first worked in the interest of our own city.

Question 7. Referring to pages 54 and 65 of your report, please to state if the Chicago, Burlington and Quincy Railroad in all cases when mentioned by you should be regarded as a road leading into Saint Louis from the north.

Answer. I have classed the Chicago, Burlington and Quincy Railroad as a northern road, for the reason that little or no business is done on that road between Saint Louis and Chicago. Chicago is one terminus and Saint Louis another. The traffic coming to Saint Louis over that line is really northern. In all pooling arrangements between our eastern roads the Chicago, Burlington and Quincy is no party and is not recognized by the other lines as an eastern road, and in fact it does not solicit that business. The northern terminus is not Chicago, but the Mississippi River end, and Chicago is the eastern end and Saint Louis the southern. The Chicago and Alton, while running northeast, is really an eastern road, bringing to Saint Louis eastern freights and taking for the east, and especially for New England points, its full proportion of eastern business. It has its fast-freight lines and through cars, which the Chicago, Burlington and Quincy has not.

Question 8. While the pooling arrangement on east-bound freights from Saint Louis was maintained, how did the rates under such pooling arrangement compare with the rates east from Chicago; or, in other words, were such pooling rates so adjusted as not to operate injuriously to the interests of Saint Louis with respect to through traffic to the east?

Answer. While the eastern pool was in existence the established rates were pretty fairly adjusted as compared with Chicago rates, although Saint Louis has never had full justice in rates according to a mileage basis.

[The answer to the following inquiry was dated October 2, 1879.]

Question —. Please to state whether the pooling arrangement has been renewed between the trunk-lines extending east from Saint Louis. Please, also, to state the more important facts as to the contest which prevailed after the dissolution of the pool on the 1st of April, 1879.

Answer. The pooling arrangement existing between the railroad lines running east from Saint Louis was renewed on August 1 on the same basis, namely: Each road to have 20 per cent. of competitive business. When either of the five roads receives more than its proportion, it must turn over to roads not having their quota sufficient freight until the proper average is made. The railroads are now inserting in their bills of lading a clause giving the companies the right to forward the freight by any line, so that the freight may be receipted for by one road and actually be transported by another. After the pool was broken up on 1st April, rates were demoralized to a fearful extent, flour being taken from Saint Louis to New York at 8 cents per barrel. This was not, however, local to Saint Louis. The same condition existed at other points. On the 9th of June the tariff was restored, and all new business taken at tariff, but old contracts, made between April 1 and June 9, were recognized. Rates have advanced since August 1, from time to time, and have generally, as far as the public know, been adhered to.

APPENDIX No. 8.

DIRECT IMPORTATION OF FOREIGN MERCHANDISE AT SAINT LOUIS: BY MR. GEORGE H. MORGAN, SECRETARY OF SAINT LOUIS MERCHANTS' EXCHANGE.

The system of "direct importation to interior cities" is of comparatively recent establishment, the first law authorizing it being passed July 14, 1870. It may be fairly described as one under which a merchant of the *interior* may have his foreign purchases brought direct to his inland city without the delay incident to examination and appraisement at the *outer* or *first* port of arrival.

For many years, while the valley of the Mississippi was developing an unprecedented growth, the resident merchants had been virtually compelled to obtain their supplies of foreign commodities from broker dealers, whose location upon our own seaboard gave them superior facilities for purchasing and receiving these goods. In the progress of time, the more progressive and enterprising made purchases direct from the foreign producers, but the vexatious delays, damages, and losses incident to the entering of them at the outer ports became so great as to be no longer bearable, and it was evident that unless relief was obtained a cessation of *direct* trade was inevitable.

To devise a remedy satisfactory alike to the inland merchant and to the officers of the Treasury Department became the problem, the great aim of the former being to secure the promptest possible delivery of his goods to the government officials *resident and acting at the inland port*, at which place and time the examinations and appraisal customary at the outer port could be had. As may be believed, this radically interfered with usage as old as the government itself, and vigorous opposition to the innovation was not wanting. The need for it, however, was so apparent, and the reasons for its introduction so cogent, that the advocates of the new system finally prevailed, and the act of July 14, 1870, was passed and approved.

The first regulations of the Treasury Department (prepared under this act) were found to be (in some particulars) so stringent as to make transactions under the law nearly or quite impossible, and it was not until these were materially modified in 1872 that "direct importations to the interior" could be said to have fairly begun.

The system has gained steadily in favor with the mercantile community and with the officials of the Treasury Department. It has been attacked many times by powerful enemies, but the smoothness with which it has worked, the faithfulness and efficiency shown by the customs officers at the larger ports of the interior, and the very remarkable absence of that loss and irregularity which it was predicted would follow its adoption, have all tended to strengthen its hold upon the business public, and insure its continuance as a feature in the business life of the country. Since that time some of the advantages derived from the system may be adverted to, as follows:

First. By means of the ocean-steamer lines and the connecting bonded fast-freight lines over inland railways invoices of European goods can be laid down upon *through* bills of lading at the principal interior cities in from twelve to twenty days from date of shipment with a regularity and precision so great as to make obsolete the old-time practice of importing a year's supply in a single shipment. Smaller and more frequent shipments are now the rule, with the attendant advantages of more closely following the markets and the seasons.

Second. In former times the importations of interior merchants were compelled to take their turn with others at the outer ports, and the delay in passing the customs, with the attendant expenses of warehousing, cartages, brokerages, &c., made an aggregate of added cost *quite equaling a fair profit on the purchases*. The new system avoids all this.

Third. Many importations embraced costly and fragile merchandise, which, being well and skillfully packed at the place of manufacture, reached our *outer* ports in good order, but being there opened for examination and appraisal, was improperly and unskillfully repacked and then subjected to the roughest part of the through journey, viz, the railway carriage, to inland destination. Large loss from breakage, without recourse of any kind, was the inevitable result. The new system entirely removes this risk.

Fourth. The representation of ownership required at the outer ports in the case of every importation by an interior merchant was of necessity made by agents, brokers,

or commissioners resident at such ports; but their services, while a necessity, were too costly, and were otherwise unsatisfactory. Their calling was pursued at too great a distance from their principals, and in questions of difference with the customs officials the rights and interests of the importers and owners were not seldom sacrificed. The new system dispenses with these services at the outer port.

The government has advanced so as not to clog the wheels of commerce.

These (with other) reasons led to the establishment of the "direct importation" law; under it foreign merchandise destined for the interior, after being landed on the dock, is the same day transferred to the vehicles of the bonded railway or steamboat line, put under customs lock and seal, and passes quickly to the interior port; on arrival there, it passes into custody of the government officers, it is claimed and duly entered by its owners, and the same manipulation is had as though it were but just landed from shipboard, all this transpiring at the *home port* of the owner, and virtually under his own inspection or supervision; the outer port is thus relieved of this class of entries, and can more satisfactorily attend to its local business; the saving of much time and money is thus effected, and a corresponding reduction made in the cost to the customer.

The customs officer, like the post-office, must perform his duty while in motion.

The statistics gathered by the Treasury Department show that this important branch of business has been conducted with a most surprising immunity from loss or irregularity. In a very few instances railway cars have been surreptitiously entered, and bonded merchandise in transit stolen or tampered with; but in every such case full compensation to the owner and the government has been made by the bonded carrier, and not a dollar of loss has followed.

Some impediments or hinderances to the fullest advantage of the system are quite apparent, and a reference to the greater ones may be made.

First. The bonds required by the law for the protection of the revenue are found so excessively large as to seriously hamper some whose importations are of great value and bulk, notably importers of sugars. The penalty of an "immediate transportation bond" is required to be double the foreign cost and the American duties, and the sureties upon this bond must affirm to responsibility for twice this sum. Many importations of sugar exceed \$100,000 in value, and the duty may reach \$50,000; double the aggregate of these is \$300,000, and surety for this sum must be \$600,000. This plainly shows the magnitude of the security required for the simple duty of \$50,000. When it is remembered, too, that the transportation of the goods must be by companies who are themselves required to bond as "common carriers" in sums never less than \$100,000, the small need of so heavy a bond is quite apparent.

Second. A serious impediment arises from the exception made by the law as against the "immediate transportation without appraisement" of all liquors, wines, and spirits. It is difficult to understand this prohibition and the discrimination against this important branch of business, for the inviolability of the packages containing goods of this character while in transit is surely as absolute as that of packages of silks, cigars, jewelry, and many other articles far more costly and valuable than liquors; moreover, the receiving, gauging, and appraisement of these goods can be as well done at destination as at the outer port. Several efforts have been made to remove this objectionable feature of the law, but thus far ineffectually.

Third. The most serious hinderance that can be named is one now attracting the attention of the Treasury Department, viz, the practice so long continued, so firmly rooted, and so great in magnitude of operation, whereby the great bulk of the goods of fine and costly texture (such as silks, velvets, kid gloves, &c.) are entered at the *outer ports* by the agents or commissioners of the foreign manufacturers upon invoices which do not fairly represent the market-value of the goods. By this means the importation of very nearly the whole of this class of merchandise is controlled at one or two principal sea-ports, and little or none is imported direct to the inland cities. Some progress has been made towards remedying this evil, but time must tell whether or not it can be effectually cured.

APPENDIX No. 9.

INFORMATION FURNISHED BY WILLIAM H. MILLER, ESQ., SECRETARY OF THE KANSAS CITY BOARD OF TRADE, IN REGARD TO THE TRANSPORTATION AND COMMERCIAL INTERESTS OF THAT CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

Question 1. Please to present facts going to show the relative importance of Kansas City, Leavenworth, Atchison, and Saint Joseph as grain markets and as provision markets. Please also to mention the population of each.

Answer. Kansas City has a regularly organized and incorporated board of trade, with a membership of two hundred and seven. It owns an exchange building that cost \$65,000, and maintains a daily exchange. The other places mentioned have nothing of the kind. Kansas City has five regular elevators, with an aggregate storage capacity of 1,320,000 and a daily transfer capacity of 295,000 bushels. It has also two private elevators, with a storage capacity of about 20,000 bushels. Leavenworth has no elevators at all. Saint Joseph has one of about 100,000 bushels storage capacity, but it has never had much business. Atchison has three elevators, the aggregate storage capacity of which is between 250,000 and 300,000 bushels. Two of them are private, and the other is patronized by grain men engaged in buying and shipping grain. There is no grain business done there on commission, which alone makes a grain market. As a grain market, Atchison is of the same style as railroad stations, where the grain is bought from farmers by the wagon-load, the only difference being that it is better equipped with facilities for handling grain and does more of it.

The provision business at all the places mentioned, including Kansas City, is in the hands of the packers, none being done on commission. Saint Joseph has one small house, Atchison one, Leavenworth none. The product of these houses is largely bought by Kansas City packers. Kansas City has four houses, one of which is the largest combined beef and pork house in the world. On pages 108 and 109 of my second annual report you will find a statement of the movement of provisions in this city for 1877 and 1878. On page 107 you will find a statement of the packing business here from its beginning, and on pages 47, 48, and 49 you will find a statement of the routes by which it is received and shipped, from which you will see that we import provisions to supply our trade, and also that our trade is largely South and West; shipments by the roads leading eastward largely go to the Atlantic seaboard.

Another fact in this connection showing the relative general commercial importance of the places named may be of interest to you. Although the railroads put them all on the same footing as competing points, Kansas City is practically the only competing point on the Missouri River. Kansas City has through competing lines in all directions. Leavenworth has none in any direction. Atchison has but two to Chicago, and Saint Joseph two to Chicago. Neither of them has any competing lines in any other direction. Kansas City has three to Saint Louis, four to Chicago, two to the West, and two to the North. She has three roads to the South, but as two of them connect with and enter the city on the track of the other, there is no competition.

I can only give you an estimate of the population. Kansas City has 60,000; Leavenworth, 20,000; Saint Joseph, 28,000, and Atchison about 15,000. The advantages for mercantile business in Kansas City are such that during the past three years the larger houses of the other places have been moving to Kansas City, or establishing branches here that exceed in magnitude the parent house.

Question 2. About what percentage of the grain shipped east from Kansas City goes direct to Saint Louis, to Chicago, and to points east of these cities respectively?

Answer. About 75 per cent. of our grain shipped east goes to the Atlantic seaboard direct, about 5 per cent. to Chicago, and but little to Saint Louis, probably not over 1 or 2 per cent.

Question 3. About what percentage of the flour shipped east from Kansas City goes direct to Saint Louis, to Chicago, and to points east of these cities respectively?

Answer. All our flour goes to points east of Saint Louis and Chicago; none to either of those cities.

Question 4. To what extent are grain and provisions shipped direct to Atlantic seaports?

Answer. About 75 per cent. of our grain is shipped to Atlantic seaports. The provisions shipped eastward from this city substantially all go to Atlantic ports direct. (See pages 103 and 109 of my second annual report.)

Question 5. To what extent are grain and provisions shipped direct to Europe on through bills of lading?

Answer. The amount of grain and provisions shipped direct to Europe on through bills of lading is trifling. A large amount of provisions is shipped to New York, care of steamship lines, and goes to Europe, but our people do not generally control it beyond New York.

Question 6. To what extent are grain and provisions shipped direct to New Orleans or to points in the Gulf States east of the Mississippi?

Answer. The amount of grain and provisions shipped to New Orleans and points in the Gulf States east of the Mississippi River is small.

Question 7. On which of the two great lines from the West into Kansas has there been the largest development of local traffic during the last three years (i. e., traffic between Colorado and Kansas City), on the Kansas Pacific or on the Atchison, Topeka and Santa Fé Railroad, and which has the larger local traffic now?

Answer. The Kansas Pacific and Atchison, Topeka and Santa Fé Railroads regard as local traffic such as arises along the lines of their roads east of the great plains. Business arising from or going to Colorado they regard as through business. With this definition in view I would say that the development of local business during the past three years has apparently been greater on the Kansas Pacific. Immigration to the country it seems has been manifestly greater. It shows the largest increase of tonnage for 1878. On through business the Atchison, Topeka and Santa Fé has had the largest development. Prior to the construction of the latter road the Kansas Pacific had a monopoly of Colorado business, but since the Atchison, Topeka and Santa Fé reached Pueblo it has gradually absorbed the traffic of Southern Colorado. Last November the Denver and Rio Grande Road was leased to the Atchison, Topeka and Santa Fé, and since that time, until the breaking of the lease in June, it had a monopoly of all business south of Denver and, under a pooling agreement, shared the business of Denver with the Kansas Pacific. With this large curtailment of Territory the Kansas Pacific still shows an increase of Colorado business, but nothing like that of the Atchison, Topeka and Santa Fé. At the present time the Colorado business of the Atchison, Topeka and Santa Fé exceeds that of the Kansas Pacific, but the breaking of its lease of the Denver and Rio Grande will break up the pool, the effect of which will be probably advantageous to the Kansas Pacific.

Question 8. About what percentage of the total shipments of grain from Kansas City during the year 1878 was to points east and to points west of the western boundary of the State of Missouri, respectively?

Answer. By reference to page 59 of my second annual report you will see that but about 65,000 bushels of wheat and almost none of any other grain were shipped in 1878 to points west of Missouri.

Question 9. About what percentage of the total shipments of provisions from Kansas City during the year 1878 was to points east and to points west of the western boundary of the State of Missouri, respectively?

Answer. By reference to page 110 of my second annual report you will see a statement of the shipments of provisions. All shipments by the Missouri Pacific, Hannibal and Saint Joseph, Saint Louis, Kansas City and Northern, and Kansas City, Saint Joseph and Council Bluffs Railroads went east of Missouri. All by the other lines went west, except by the Missouri, Kansas and Texas Railroad, which went south to Texas.

Question 10. I presume that the shipments from Kansas City, by the Kansas City, Saint Joseph and Council Bluffs Railroad, are largely to Chicago over the Chicago, Burlington and Quincy northern line, and over the Chicago, Rock Island and Pacific; also that the shipments east over the Saint Louis, Kansas City and Northern Railroad were in part to Chicago over the Chicago, Burlington and Quincy Southern line, via Moberly, and the Chicago and Alton, via Mexico, and in part to Saint Louis over the entire line of the Saint Louis, Kansas City and Northern. In this am I correct?

Answer. Nearly all of the shipments by the Kansas City, Saint Joseph and Council Bluffs Railroad went east over the Chicago, Rock Island and Pacific, and the shipments by the Saint Louis, Kansas City and Northern went east by the Chicago and Alton, via Mexico, or to Saint Louis over the entire line. It makes no connection with the Chicago, Burlington and Quincy Railroad.

Question 11. In view of the facts noted in the preceding inquiries, is it possible for you to state the percentage of shipments to the East, and of receipts from the East over the Chicago, the Hannibal, and the Saint Louis lines, respectively?

Answer. The Southwestern Rate Association, which existed until May last, included all lines leading to Chicago, to Saint Louis, and to Toledo, via Hannibal. Its division of business was 45 per cent. to the Chicago lines, 45 per cent. to the Saint Louis lines, and 10 per cent. to the Hannibal lines, and I am informed by the western commissioner here, H. H. Courtright, esq., that the business was actually so divided.

Quantities of the principal commodities received at and shipped from Kansas City, by the various routes, for 1878.
RECEIPTS.

Route.	Wheat.	Corn.	Oats.	Rye.	Barley.	Flour.	Meal.	Bran.	Hominy.	Pork.	Bacon.	Lard.
M. P. R. W., East.	Bush.	Bush.	Bush.	Bush.	Bush.	Bkls.	Owts.	Owts.	Owts.	Bkls.	Lbs.	Lbs.
M. P. R. W., West.	324,150	161,960	23,300	44,400	29,140	25,617	7,368	8,599	6,912	379	1,410,753	538,114
M. P. R. W., Grand Av.	214,650	183,590	96,000	64,750	38,000	42,621	5,441	6,744	2,588	45	78,484	89,384
M. P. R. W., Grand Av.	6,000	10,111	.....	800	400	320	4.0	2	100	.....	44,000	180,000
St. L., K. C. & N. R. W.	66,881	.....	.....	12,856	1,466	7,366	5,865	3,559	.....	4	690,465	3,000
K. C., St. J. & C. E. R. R.	4,350,560	1,917,440	20,910	181,050	50,690	103,754	50,526	50,526	3,400	.....	289,100	570,110
Kansas Pacific R. Railway	3,672,159	823,970	23,908	30,472	4,465	28,982	2,124	3,450	90	.....	110,740	132,040
A. T. & S. F. R. R.	255,000	683,132	21,300	30,400	.....	5,217	350	1,000	.....	3	12,840	.....
L. & G. R. R.	.....	.....	.....	.....	.....	1,718	200	600	.....	.....	1,550	5,050
M. R. F. R. & G. R. R.	89,300	1,021,040	42,900	3,500	.....	.....	.....	.....	.....	.....	.....	.....
M. R. F. R. & T. Railway	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
K. C. & E. R. R.	38,190	2,418	.....	.....	.....	160	2,540	2,900	.....	.....	.....	.....
Total	9,014,291	4,911,529	155,089	352,962	163,257	70,038	218,071	70,781	13,434	521	2,905,837	1,634,698

Route.	Meat beef.	Fresh beef.	Tallow.	Wool.	Hides.	Fat.	Apples.	White beans.	Castor beans.	Flax-seed.	Broom-corn.	Butter.
M. P. R. W., East.	Bkls.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Bkls.	Bush.	Bush.	Bush.	Bales.	Lbs.
M. P. R. W., West.	50	3,777,170	3,777,170	328,498	523,496	91,279	19,655	2,436	4,400	2,150	429	17,964
M. P. R. W., Grand Av.	3	6,700	6,700	52,850	32,454	2,200	4,485	6,600	29,650	33,984	5,360	26,735
M. P. R. W., Grand Av.	.....	460	460	.....	5,002	15	5,355	195	339	510	192	8,562
St. L., K. C. & N. R. W.	.....	.....	.....	168,000	3,870	520	1,425	325	600	.....	.....	38,540
K. C., St. J. & C. E. R. R.	.....	.....	.....	12,074,219	8,671,999	2,221,781	3,004	5,953	23	45,061	28,008	694,952
Kansas Pacific Railway	.....	1,091,234	1,091,234	2,847,471	743,703	76,643	5,953	3	19,313	58,441	3,010	95,317
A. T. & S. F. R. R.	.....	169,824	169,824	2,847,471	743,703	76,643	73	2,982	67,144	41,400	13	31,215
L. & G. R. R.	.....	470,264	470,264	68,065	435,922	12,612	40	400	27,144	122,900	1,023	24,600
M. R. F. R. & G. R. R.	.....	154,900	154,900	70,110	424,400	22,160	224	52	27,960	.....	.....	.....
M. R. F. R. & T. Railway	.....	.....	.....	.....	33,085	22,400	.....	.....	.....	.....	.....	.....
K. C. & E. R. R.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	53	19	1,993,259	10,203,874	11,231,650	2,415,840	33,325	11,685	155,677	295,392	39,708	974,010

RECEIPTS—Continued.

Route.	Eggs.	Cheese.	Potatoes.	Onions.	Hay.	Coal.	Zinc.	Pig lead.	Ore.	Coffee.	Sugar.	Salt.
	<i>Pkgs.</i>	<i>Boxes.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Sacks.</i>	<i>Bbls.</i>	<i>Bbls.</i>
M. P. R. W. East.....	4,231	23,743	63,023	9,136	341	12,926	.....	3,900	.....	54,053	58,859	46,472
M. P. R. W. West.....	1,550	3,240	11,068	982	4,459	9,216	.....	3,000	.....	310	417	444
M. P. R. W. Grand Av.....	5,726	3,291	11,104	247	210	9,667	.....	.....	.....	18,343	15,774	9,696
St. L. & N. R. W.....	2,637	1,050	4,100	.....	.....	9,438	.....	20,000	.....	1,268	4,093	40,358
K. C. & N. R. R.....	.....	1,929	10,910	1,459	.....	1,433	940	.....	224,000	.....	.....	9,665
Kansas Pacific Railway.....	340	5,038	42,335	7,749	3,502	46	108,000	8,032,170	29,863,084	43	240	1
A. T. & S. F. R.....	6,326	3,941	1,660	37	1,698	427	10,800	901,004	274,751	1	3	210
L. L. & G. R. R.....	1,563	3,714	1,992	190	2,570	239	66,000	.....	21,000	8	7	71
M. E. P. S. & G. R. R.....	174	344	1,001	300	1,401	112,747	18,379,600	19,645,100	80,000	197	.....	.....
M. K. & T. R. R.....	339	.....	333	.....	.....	.....	.....	.....	.....	.....	.....	.....
K. C. & E. R. R.....	18	.....	.....	.....	.....	21,516	.....	.....	.....	.....	16	.....
Total.....	22,289	36,505	131,986	12,464	14,642	184,667	17,372,440	29,761,794	31,578,945	94,722	115,385	104,060

SHIPMENTS.

Route.	Wheat.	Corn.	Oats.	Rye.	Barley.	Flour.	Meal.	Bran.	Hominy.	Pork.	Bacon.	Lard.
	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bush.</i>	<i>Bbls.</i>	<i>Sacks.</i>	<i>Certs.</i>	<i>Certs.</i>	<i>Bbls.</i>	<i>Lbs.</i>	<i>Lbs.</i>
M. P. R. W. East.....	2,245,650	1,700,024	191,750	214,850	140,400	27,278	57,329	2,915	2,566	5,094	7,939,620	2,596,186
M. P. R. W. West.....	4,300	78,700	10,000	13,800	24,480	1,295	2,377	2,318	1,981	1,373	1,162,316	369,105
M. P. R. W. Grand Av.....	2,000	.....	.....	.....	1,066	1,295	1,295	400	1,061	.....	6,005	13,144
St. L. & N. R. W.....	9,560,960	940,740	.....	13,960	6,100	4,722	11,702	.....	.....	323	1,166,973	5,293,900
St. L. & N. R. R.....	2,934,493	1,632,156	16,990	99,624	82,008	13,600	35,513	400	.....	463	537,100	1,102,355
K. C. & N. R. R.....	806,806	340,015	1,468	7,019	2,227	11,351	36,833	645	.....	1,930	1,266,940	2,245,333
Kansas Pacific Railway.....	.....	.....	.....	.....	.....	.....	.....	835	327	1,930	7,374,100	920,370
A. T. & S. F. R.....	13,742	393	.....	.....	.....	559	1,290	.....	31,023	1,930	1,671,690	413,816
L. L. & G. R. R.....	50,940	.....	.....	.....	.....	38	303	1,124	213	19	143,311	5,450
M. E. P. S. & G. R. R.....	30,950	271	366	336	1,002	4,350	53	104	249	18	600,963	21,900
M. K. & T. R. R.....	.....	.....	.....	.....	.....	.....	.....	.....	100	3,101	24,191,303	6,580,479
K. C. & E. R. R.....	44,196	196,116	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	9,930,131	5,450,813	154,243	357,474	255,610	60,194	180,478	11,755	23,038	11,421	41,757,718	16,896,007

SHIPMENTS—Continued.

Route.	Meas beef.	Fresh beef.	Tallow.	Wool.	Hides.	Felts.	Apples.	W. beans.	C. beans.	Flaxseed.	Broom corn.	Butter.
	Bbls.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Bbls.	Bush.	Bush.	Bush.	Bales.	Phys.
M. P. R. W. East.	1,167	250,300	983,169	3,224,883	2,383,254	419,489	733	9,730	105,750	51,175	4,025	17,997
M. P. R. W. West.	516	636	493,043	753,903	1,370,094	106,353	4,181		783	400	135	2,229
M. P. R. W. Grand Av.	306	4,412	33,053	1,258	4,925,240	2	978	122	4,938	1,358	8,319	22,943
H. & S. J. N. R.	4,605	2,700	383,830	6,773,890	1,584,534	191,530	2,307	400	73,196	131,000	2,511	40,460
St. C. & N. R.	2,997	4,712	3,270,700	4,453,631	1,584,534	191,530	2,307	400	73,196	131,000	2,511	40,460
K. C. St. J. & C. B. R.	1,405	453,400	319,960	6,350	102,935	650	5,285	1,419	370	15,713	1,549	31,430
Kansas Pacific Railway	90	17,300	9,902	1,100	7,210	650	5,285	1,419	370	15,713	1,549	31,430
A. L. & C. H. R.	2	440	9,902	1,100	7,210	650	5,285	1,419	370	15,713	1,549	31,430
M. P. R. W. & G. R. R.	50	1,000	1,000	6,770	25,380	650	5,285	1,419	370	15,713	1,549	31,430
M. K. & T. Railway	7,497	43,063	902,294		25,380	650	5,285	1,419	370	15,713	1,549	31,430
K. C. & E. R.							5,090	30	4	3,695	3	15,295
Total	10,306	6,329,359	3,363,701	14,908,516	9,685,877	783,901	29,671	24,354	181,403	264,001	18,504	159,808

Route.	Eggs.	Cheese.	Potatoes.	Onions.	Hay.	Coal.	Zinc.	Pig lead.	Ore.	Coffee.	Sugar.	Salt.
	Cases.	Bboxes.	Bush.	Bush.	Tons.	Tons.	Lbs.	Lbs.	Lbs.	Sacks.	Bbls.	Bbls.
M. P. R. W. East.	344	681	15,180	400	4,210	6,566	6,604,585	15,943,694	25,225,153	783	740	11,761
M. P. R. W. West.	1,222	6,372	27,456	3,157	58	34,598	14,000	14,000	19,593	15,071	875	25,500
M. P. R. W. Grand Av.	25	572	27,175	56	30	1,021	91,000	98,340	160,000	1,340	467	533
H. & S. J. N. R.	2,351	1,000	2,195	56	169	194	91,000	98,340	1,655,940			
St. C. & N. R.	103		7,850	10	158	54	1,520,600	16,741,560	1,077,360			
K. C. St. J. & C. B. R.	710	56	7,850	10	158	54	1,520,600	16,741,560	1,077,360			
Kansas Pacific Railway	80	90	22,313	30	182	36,040	1,028,100	292,000	12,468,000	1,081	1,130	2,629
A. L. & C. H. R.	62	1,104	6,393	145	100	30,040	1,100		94,999	33,485	695	63,229
M. P. R. W. & G. R. R.	29	653	5,490	53	139	139	1,100		14,163	19,687	119	30,248
M. K. & T. Railway	19	1,377	2,373	197					4,196	4,791	38	12,914
M. P. R. W. & G. R. R.	8	17	7,836	748	333	2,992			5,037	6,810	44	10,658
K. C. & E. R.									405	463	1	
Total	5,635	11,268	103,206	5,370	5,313	90,952	9,774,534	35,127,490	39,731,653	73,670	38,813	153,750

APPENDIX No. 10.

INFORMATION FURNISHED BY COL. MILO SMITH, OF CLINTON, IOWA, IN REGARD TO THE COMMERCE OF THE MISSISSIPPI RIVER BETWEEN SAINT LOUIS, MO., AND SAINT PAUL, MINN., AND THE COMMERCE OVER RAILROAD BRIDGES CROSSING THAT RIVER BETWEEN THOSE CITIES, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

Question 1. Please to present statistics showing the tonnage passing down the Mississippi River and the tonnage crossing that river at each railroad bridge between Saint Paul, Minn., and Saint Louis, Mo.; also, the character of the commerce on the river, both up and down, and the character of the traffic, both east and west, passing over the railroad bridges across the Mississippi River, during the year 1878.

Answer. The season of navigation of 1878 commenced March 20, and ended November 30, lasting 235 days. The total tonnage of steamboats and barges employed in the transportation of freight passing the bridge at Dubuque was, of boat measurement, 208,400 tons. Of this amount 76,160 tons stopped at Fulton, Ill., delivering at that point 42,600 tons (of 2,000 pounds) of grain and flour. The total boat-tonnage passing the bridge at Clinton was 132,240. Of this amount 34,640 boat-tons stopped at Rock Island, leaving 97,600 boat-tons going to Saint Louis, carrying 36,740 tons, 76 per cent. of which was grain and flour. The tonnage up the Mississippi River is less than down, consisting principally of merchandise and agricultural implements, &c. The tonnage passing above Keokuk to Fulton will not exceed 20,000 tons, from Fulton to Dubuque not to exceed 30,000 tons, and from Dubuque north not to exceed 40,000 tons.

The number of tons of freight which passed east and west over the bridges across the Mississippi River from Saint Paul, Minn., to Saint Louis, Mo., is as follows:

	East. Tons.	West. Tons.
Winona	46,000	37,000
La Crosse	202,450	177,810
Prairie du Chien	153,970	98,750
Dubuque	164,736	70,383
Sabula	36,636	25,047
Clinton	709,990	472,530
Davenport	743,460	540,060
Burlington	572,070	381,380
Keokuk	46,342	21,609
Quincy	175,752	117,168
Hannibal	121,379	12,846
Louisiana	182,053	98,029
Total	3,554,838	2,052,612

Of the above east-bound, about 65 per cent. was grain and flour, 20 per cent. was live stock, and 15 per cent. was miscellaneous. Of the west-bound freight, 60 per cent. was merchandise, 25 per cent. was lumber, and 15 per cent. was miscellaneous. It will be observed that the tonnage of the bridges of Northern Iowa and Minnesota is less for 1878 than for 1875. This arises from the almost entire failure of the wheat crop in that portion of the country for 1878. The tonnage of the more southern bridges has largely increased, owing, in a great measure, to the immense emigration to the Southwestern States and Territories.

Question 2. Has there been an increase or decrease of commerce on the Mississippi River during the last three years? In this connection, please to state your opinion as to the effect of the improvements made by the government at Des Moines Rapids and at Rock Island Rapids upon the commerce of the river.

Answer. The record kept by bridges across the Mississippi River of the steamboats and barges passing up and down through them shows that the tonnage of the river is materially diminishing each year, and gradually seeking the railroads. If the same decline continues for the next decade that has existed in the past, the remuneration for river-transportation companies will be of such a diminutive character as to pro-

duce small profits for those engaged in the business. The navigable season is growing shorter year by year, and the brief space of time between the opening and closing of navigation on the Upper Mississippi, at a season of the year when but a small portion of the cereals of the Northwest are seeking a market, seriously impairs its usefulness for carrying purposes. Before the advent of the immense net-work of railroads that now invades every productive portion of the Western States and Territories, it was customary to haul the products from great distances in the interior to the river towns, store them, and await the opening of navigation; but the railroads have revolutionized this custom, and the products that formerly sought the river towns for reshipment now pass through on the great trunk-lines of road to Chicago. The uncertain stages of water in the river destroy the confidence of shippers, and persons desiring to ship ordinary classes of products prefer the railroad, that runs almost parallel with it from Saint Paul to Saint Louis, at even greater rates than could be secured by the water-route. The volume of water in the river is gradually growing less, and various causes are assigned therefor. We do not know that any scientific investigation has ever been held to determine the true cause, but innumerable theories are set forth, among them I present the following as having come to my knowledge:

The settlement of the country and the breaking up of the land adjacent to the tributaries, causing the water that formerly flowed into the streams to soak into the ground, is assigned by some as the cause. Others claim that the fall of snow is diminishing in the upper country, that the cutting of such immense quantities of pine timber causes the snow in the spring to melt and pass away so rapidly as to render the volume of water reaching the river of brief benefit and to recede almost as rapidly as it rose. These and various other theories are put forth to account for the low water, but all concede the great point that the volume of water is gradually diminishing, that navigation is becoming more difficult and expensive, and that the business seeking the river is year by year falling off, while the railroad tonnage is rapidly increasing. As to the benefit to the navigation of the river by the improvement of the Rock Island and Des Moines rapids there are conflicting opinions, and the question can be viewed from various stand-points. But looking at it practically and in the light of the experience of the past ten years, it could hardly be claimed that the benefit had been commensurate with the expenditure. When the water in the river is at a stage requiring the improvement the boats cannot run above the rapids, and the business seeks the railroads rather than submit to the delay attendant on shipping by steamboat. During the entire spring of 1879 there was not water enough in the river to allow a steamboat of ordinary draught to enter the port of Saint Paul until nearly the 1st of June. The extensive saw-mills along the river have all been idle, having lost three months of the season, or nearly so, in consequence of an insufficient quantity of water to float their logs. This low stage of water extended from the Des Moines Rapids to Saint Paul, and when the stage of water is sufficient to do a profitable business above the rapids, there is sufficient water to carry the boats over the rapids. The improvement, however, has been beneficial to a certain extent, but it is very questionable whether the benefits will correspond with their cost to the people. The peril (that formerly existed) to steamboats crossing the rapids in consequence of the serpentine channel and the numerous rocks that were for years so destructive an agency to the boats has been obviated by their improvement, but we must conclude from the best information obtainable and by a close observation of the river from Saint Louis to Saint Paul that its greatest value as a transportation route for the people of its fertile valley is in what it might do, and not in what it is or has been doing for a number of years past. As a regulator of rates for through shipments to the seaboard its benefits, in our opinion, are incalculable. Nature has decreed that it shall ever stand between the great population skirting its banks for hundreds of miles and any future extortions that might be practiced by the all-rail routes. Against them as a monitor and regulator and viewed from this light the improvements have been, and will continue to be, of great value. The reasons for the great decline in river business are obvious. First, the change in the manner of doing the produce business of the West requires it to be done in the shortest possible time, and the roads crossing the river at all the important points penetrate the country where the bulk of the grain is raised, gather it up in car loads, and, when once in the train, no more time is consumed in reaching the market in Chicago than would be by stopping for reshipment at the river crossing, while Chicago is a market at all times of the year, ample to take everything that is raised west of that point, and with unequaled facilities for handling it expeditiously. There is no town on the Mississippi River possessing these advantages. They can only take what is required for home consumption. All towns on the river above New Orleans are but way stations, as it were, on the railroads and river, while Chicago, at the head of lake navigation, becomes the transshipping point for all Western products, and a market that can be relied upon, easily reached, and from which rapid returns are made to the seller, thus enabling him to do a large amount of business on a small capital. As an illustration, there are scores of men along the lines of the different railroads in Iowa who are doing an extensive grain-buying business without to exceed one hun-

ded dollars each in capital. They buy a car load of wheat; when it is shipped they draw a sight draft on their commission house in Chicago, get it cashed at the bank where they transact business, and in this way they are kept in sufficient funds to buy all that the market offers, and, as the result, Chicago receives the benefit. No such facilities are offered from any other point. By the river route returns are so slow, the market is so uncertain, and it requires so much capital to do the business, that it is practically abandoned, and almost the entire products of the West are seeking the all-rail route to the seaboard, and being diverted from the water lines. Notwithstanding the facts and observations herein set forth, we must not lose sight of the fact that the enormous lumber business done on the Mississippi River, amounting to 1,350,000,000 feet of lumber for the year 1878, makes it of incalculable value as a means for the transportation and distribution of this product, and in point of value its greatest benefits to the people at the present time are in this direction.

Question 3. Please to state approximately the percentage, respectively, of first, second, third, fourth, and special class freight, both east bound and west bound, that crossed the Mississippi River during 1878.

Answer. None of the roads running west from Chicago keep a record of the different kinds of freight passing over their lines east or west. From the best approximate estimate obtainable it would appear that the proportion of first-class freights carried west would be less than 5 per cent., and of all classified freight less than 15 per cent. All classified freight east bound embraces but from 3 to 5 per cent. of the total movement.

Question 4. Please to state the changes which have been made in the laws of Iowa with respect to the regulation of railroads since the year 1876, and describe briefly the present condition of the railroad question in Iowa.

Answer. The changes made in the laws of Iowa since 1876 respecting the regulation of railroads will be found in chapter 77, acts of the seventeenth general assembly. It repeals chapter 68, acts of the fifteenth general assembly, and provides for a board of railroad commissioners. This act substituted the obnoxious "granger law," enacted in 1874, and was approved March 23, 1878, to take effect April 1, 1878. It provides for three commissioners (one of whom must be a civil engineer), who shall hold office for one, two, and three years, respectively, and shall be appointed by the governor, with the advice and consent of the executive council. Section 1 of the act repeals certain sections of a former act which seemed to be inconsistent with this act. Section 2 provides for the board, appointment, services, qualifications, and location of their office. Section 3 defines their powers and duties, and is the leading section so far as the jurisdiction of the board is concerned. This section provides that the board shall have general supervision over all railroads in the State operated by steam, continuing to accord to them sweeping authority difficult of proper construction. It concludes by stating that nothing in this section shall be construed as relieving the company from its present responsibility or liability for damage to person or property. Section 4 requires an annual report from the board to the governor of their doings the preceding year, disclosing the workings of the railroad system of the State, its relation to the general business and prosperity of the State, and appropriate suggestions and recommendations in relation thereto. Section 5 authorizes the commissioners to require a report annually from each railroad in the State. Section 6 fixes the place of their office, their compensation and that of their secretary. Section 7 prescribes an oath of office. Section 8 provides for a fund for salaries and expenses. Section 9 grants them inquisitorial powers of investigation, authorizing them to issue subpoenas, &c. Section 10 is a section of general railroad law. Section 11 prohibits unequal and discriminating charges and special rates, concessions, and drawbacks. Section 12 prohibits unreasonable charges for transportation of any character. Section 13 provides a penalty for violation. Section 14 prescribes the duty of the railroad companies and of the commissioners as to accidents involving personal injury or loss of life. Section 15 provides that the mayor and aldermen of any city, or twenty-five legal voters, may make complaints, &c. Section 16 asserts that the phrase railroad, in this act, shall mean all railroads and railways operated by steam, whether operated by the corporation owning them or not. Section 17 provides that any persons or corporations may bring suit against any railroad company for violation of any of the laws of this State for the government of railroads. Section 18 repeals all acts inconsistent with this act. Section 19 (the final section) provides for immediate enforcement. The law thus far has worked admirably, and the mutual concessions granted between the people and the railroads upon all disputed questions have created a noticeable change in the sentiments of the people throughout the State toward railroad corporations. This board of commissioners serves as a monitor for the prevention and correction of all abuses. We believe that the principle of non-interference exerted by the board, unless called upon to rectify reported grievances, is susceptible of beneficial results to the people and the corporations alike. Every case that has been reported to the board, as far as our knowledge extends, has been thoroughly in-

vestigated and satisfactorily adjusted between the aggrieved parties and the railroads.

The first annual report of the commissioners made to the governor in answer to the requirements of the law was issued June 30, 1878. It is voluminous and contains much valuable information. Its compilation is of value to the public generally, showing intelligibly the magnitude of the railroad system within the State, and is also a source of value to the railroads, and particularly so to the members of the legislature, who may at a glance obtain information on this important subject that could otherwise be obtained only by studious investigation and research. The law governing the board is crude and imperfect in many cases, but recommendations rectifying it and for its amendment will be made to the biennial session of the legislature convening in December, 1879. Since its adoption, however, notwithstanding its imperfections, the people and the railroad corporations have been brought nearer together, understand their several rights and requirements better, and at no period since the inauguration of railroad legislation in Iowa has the commerce of the State been managed with so little complaint; and while we must admit that this mode of regulation is as yet an experiment in the State we still feel that it promises a satisfactory solution of the vexatious problem, and in its perfected form will become permanent. The greatest evil of the whole railroad system, both as regards stockholders and patrons, has been the secrecy with which everything was done by the managers of the roads. The more publicity given as to the general management of the roads the less chance there is for dishonest management, and as a result less reason for patrons to find fault, and any error committed will be readily discovered and corrected. In this respect alone the commissioner system has been of incalculable value.

Question 5. What discriminations in rail rates now constitute causes of complaint to the entire population of the State of Iowa?

Answer. There are no discriminations in rail rates at the present time that are a source of complaint to the entire population of Iowa.

Question 6. What rail rates now in force are regarded by the people of particular towns or sections of Iowa to be discriminations against them and in favor of the people of other portions of the State?

Answer. There is no general regulation of the roads that is considered unjust or that is considered by the people as discriminating against any portion of the State or in favor of any other portion. There is much more of a disposition manifested by the railroads to protect their patrons and deal justly by them now than ever before, which, to a great extent, is due to the supervision exercised by the commissioners.

Question 7. Has any attempt yet been made in the State of Iowa, either by statute or by regulation of the railroad commission, to formulate a general rule for determining whether rates are reasonable or unreasonable, or for determining when discriminations shall be regarded as just and when they shall be regarded as unjust?

Answer. No attempt has yet been made in the State of Iowa, either by statute or by regulation of the railroad commission, to formulate a rule for determining what shall be regarded as reasonable or unreasonable rates, or what discriminations shall be regarded as just and as unjust. Each case when presented is taken up by the commission and decided upon its merits without reference to any general rule.

Question 8. Please to state whether the courts of the State of Iowa have yet formulated any rule for determining with respect to railroads what shall be regarded as constituting "like circumstances" in the administration of the law of the common carrier, which requires that *the same rates shall be charged for the transportation of commodities shipped by different persons under like circumstances*.

Answer. The question of what is considered unjust discrimination, or what shall be considered "*like circumstances*," has never been brought before any of the courts of Iowa, neither has any adjudication ever been had upon any question connected with the railroad tariff except the single question of the right of the legislature to enact such a law, and that question was fully determined by the Supreme Court of the United States in what is known as the "granger cases."

Question 9. About what percentage of the total traffic of the trunk lines of Iowa is strictly confined to the State, and what percentage is inter-State traffic?

Answer. The trunk lines crossing Iowa keep no accounts that will enable them to determine the exact per cent. of local and inter-State traffic, but in the report of the Chicago, Burlington and Quincy Railroad made to the railroad commissioners of Iowa for the year ending June 30, 1878, they make the local traffic about 33 per cent. and the inter-State traffic 67 per cent. The local business of all the trunk lines has increased in the last three years, and a fair estimate for the year 1878 would be for the Chicago, Burlington and Quincy Railroad from 28 to 33 per cent.; for the Chicago, Rock Island and Pacific Railroad, from 25 to 30 per cent.; and for the Chicago and Northwestern, from 28 to 34 per cent.; and the Illinois Central Railroad from 23 to 27 per cent. The percentages vary from year to year as the crops vary in quantity and as the country along the lines is developed. Since the repeal of the schedule of rates known as the "granger tariff" less notice has been taken of the question of local and

inter-State freights, as the law does not affect either; hence there is no occasion for making any distinction in the different kinds.

Question 10. Are any of the east and west trunk lines crossing the State of Iowa controlled by any one of the trunk lines extending from Chicago to the seaboard in such manner as to influence the course of shipment from Iowa to any particular one of the four principal Atlantic seaports, viz, Boston, New York, Philadelphia, or Baltimore?

Answer. None of the trunk lines across the State of Iowa are controlled by the trunk lines from Chicago to the seaboard. The multiplicity of avenues for transit from Chicago eastward, and the formidable competition that has existed in the rivalry between those giant corporations for through business, with the chain of great lakes for a regulator, has afforded the Iowa lines extraordinary facilities for the distribution of their traffic to the different trunk lines at Chicago with advantage to themselves and their patrons. The Iowa lines do not give their business to any particular eastern connecting line, but distribute it promiscuously among them wherever it can be done best with a view to economy, dispatch, and with the greatest convenience. All the great trunk lines from Chicago to the East will send cars to any of the Iowa lines for through shipments, and by this means through business is done from interior points in Iowa, without breaking bulk, to the seaboard. The economy with which this is done to the shipper promises a rapid development in through traffic, and the value of the competition, existing at Chicago for this business, to Iowa shippers is beyond computation.

Question 11. Please to revise your statement as to the cost of railroad bridges across the Mississippi River.

Answer. The cost of the several bridges across the Mississippi River from Saint Paul to Saint Louis is as follows:

At Winona	\$200,000
At La Crosse	250,000
At Prairie du Chien (pile and boat)	120,000
At Dubuque	800,000
At Sabula (temporary)	20,000
At Clinton	800,000
At Davenport, built conjointly by the government and railroad company ..	2,000,000
At Burlington	800,000
At Keokuk	800,000
At Quincy	1,500,000
At Hannibal	750,000
At Louisiana	800,000
Total	\$8,840,000

There has been no change in the cost of any of the bridges on the river during the past three years except at La Crosse, where a new iron bridge has been built in place of a boat-crossing.

Question 12. Please to state any facts which may occur to you as to the development of through traffic between points in Iowa and ports in foreign countries, and in this connection please to state whether in your opinion it is probable that this direct mode of shipment is likely to have a large development.

Answer. There are many indications of an increase in through shipments. Very many of the manufacturing establishments of Iowa are now shipping their products direct to European markets. At various points in the State oatmeal-mills have been established, and a very large proportion of their entire product is shipped direct to Scotland and England, and the pork-packers of the State ship direct to Ireland a large percentage of their goods. These shipments are made in through cars from the point of manufacture to the seaboard at Boston, New York, Baltimore, and Philadelphia on through bills of lading covering ocean transportation. This mode of shipping is constantly increasing, and now it is not an uncommon thing for live stock to start from points west of the Mississippi River direct for European markets without a change of ownership until sold to the consumers on the other side of the Atlantic. Quite frequently the men in charge of live stock on the trains when they leave Iowa make the entire journey to Europe and deliver it to the purchasers there. The shipments on through bills of lading are increasing from year to year, and it is not improbable that the time will come within a very few years when a very large portion of the business west of the Mississippi River will be done in through cars to the seaboard and on through bills of lading to foreign ports. The economy of time and expense will make this the favorite way of doing the business. It is not unreasonable to look forward to the time when the trunk lines running from the seaboard to Chicago will control the main trunk lines west of Chicago, and that the practice will prevail of loading all the products along the road in through cars for an eastern market, and that the rates of transportation from all interior points to the seaboard will be made without reference

to any intermediate points. The active competition between the trunk lines east of Chicago and the water transportation to the seaboard will always make the rates as low as possible, and will compel all the lines to avoid transshipment and all unnecessary expense in getting the products from the producer to the coast. This competition will exist as long as the interest of New York is opposed to Philadelphia, Baltimore, and Boston. As the interests of these cities can never be united, no combination of rates made by the trunk lines will endure for any length of time and no pool arrangement or agreements on rates from Chicago east can be maintained. The age of high rates is past, and all the trunk lines will be forced to practice the utmost economy in the transaction of their business, in order to enable them to do the business for the compensation they will be compelled to accept. The whole tendency of rail transportation is toward the longest shipments possible without breaking bulk, and the necessity for this economy in through transportation will tend to increase the shipments of all Iowa products direct to the seaboard and will inevitably develop a very large through business.

APPENDIX No. 11.

INFORMATION FURNISHED BY J. D. HAYES, Esq., OF DETROIT, MICH., IN REGARD TO THE TRANSPORTATION AND COMMERCIAL INTERESTS OF THE UNITED STATES, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JULY, 1879.

Question 1. Please to present a statement explaining the principles upon which railroad-freight classifications are established on the trunk lines connecting the West with the seaboard.

Answer. The classification of freight upon the railroads of the country, by which the charges are regulated upon their schedule or tariff, is intended to be equitable, upon the principle of charging per 100 pounds, according to the nature and value of the articles carried, together with the liability to injury and damage for which the railroad companies may be responsible as common carriers; also, in proportion to the bulk, in proportion to weight, and the cost of fitting, in some cases, special cars for special kinds of freight.

(A.) Wheat, corn, oats, lumber, flour, feed, meal, malt, &c., being sent generally by full car-loads, and loaded mostly by the shipper and unloaded by the receiver, and in some cases one being the product of the other, and forming staples of every-day use and consumption, are placed in the same class, so as to give an equal share in trade. The grain, flour, and meal standing equal, whether shipped in the berry or in the manufactured state, in both markets, subject to the same rate of freight, such property being also shipped by vessel-loads in the unmanufactured state, and being largely cheap in cost, the freight must of necessity rule correspondingly cheap by rail, to meet the competition which the demands of the public and the nature of the property and the competition have made necessary. On the other hand, drums are shipped, if at all, in small lots, liable to great damage both from carriage and weather; therefore, they are put four times first class. Wire cheese-safes, empty cans, cabinet-ware set up, grain-cradles, empty demijohns, copper stills, fanning-mills, feathers, and such like goods requiring great care, and of value, which entail large bills for damages, and which are shipped in smaller quantities, with their bulky nature would not pay as much net money at double first-class rates as the grain at the lower rates. Pork, beef, lard, &c., in casks, in full car-loads, can also be carried with less risk or loss and damage than *fresh* pork and *beef*, or even salted meat in bulk. Therefore the rates are fixed to correspond, as near as may be, with the articles carried and the quantity and condition of the property.

(B.) The same argument holds good upon west-bound freight. Cement, chain-cables, rice, clay, fish (salted), coffee, car-axles, iron, crockery, fertilizers, window-glass, nails, iron castings, lead, rope, rope-wire, slate roofing, soap, soda-ash, sugar, car-wheels, are usually sent by car-loads, they being either cheap productions or what is known as "close articles." So far as profit is concerned they must be put into the lower-priced freight rates, as the cost of carriage forms a large percentage of the value or cost of the property at its destination, while acids, baskets, bed-springs, handboxes, chairs, mattresses, children's wagons and hobby-horses, hats, boots, &c., are bulky, light, and liable to damage. Dry goods, being in bales and boxes and of very great value, are liable to damage from leakage, stain, chafing, oil; also subject to being stolen. All such damages in transit have to be paid for by the railroads. The net proceeds according to the risk of the common carrier and the nature and ability of the goods to pay a compensating rate, are considered in fixing the rate. Then again carriages, plate-glass, machinery, &c., of great value and too large to go into a box-car, must be put upon platform cars; perhaps a carriage weighing 500 pounds will require an entire car, which has to be fitted so that the carriage can go safely upon it, without damage; that should pay a special rate in proportion to the car capacity, the risk in transportation and value of the property.

Question 2. Please to state the conditions surrounding the different roads which lead to differences in the arrangement of commodities under the different classifications. In this connection please to mention practices with regard to the classification of commodities which, in your opinion, are detrimental to the public interests.

Answer. The condition and situation of the principal centers of commercial trade, as well as the geographical location of other countries, have their influence upon

classification and rates. Sugar, coffee, rice, and the productions of the West Indies, South America, and Mexico can go by water to the city of Saint Louis at a very cheap rate via New Orleans. The city of Chicago must get a corresponding rate upon such goods from the Eastern seaboard cities or abandon that route, which influences the merchants of the Eastern cities and Chicago to work jointly together to procure such rates from the railroads as will enable them to compete with Saint Louis. Then, in turn, Cincinnati, Toledo, Cleveland, Buffalo, Detroit, Indianapolis, Louisville, and other commercial centers must get a corresponding rate upon such goods in order to equalize trade and commerce at all the principal centers of business. The practices which are detrimental to the public interests in regard to classification are as follows: Machinery is first class, which is intended to cover the complete machine. But the light wood part, of very little weight, may perhaps be billed first-class, while the wheels and castings are billed heavy castings, fourth, or light castings in boxes at third class. Cigars in boxes, not strapped, billed as merchandise, first class, which is just half of the tariff rates. Marble slabs, owner's risk, fourth class; carrier's risk, first class. Owner's risk only includes the risk of *ordinary* transportation. Neglect of employees or defective cars or track would not be covered. Therefore the dealer that ships under orders without a knowledge of the necessity of making a special contract and signing a release, pays about 60 per cent. more than the larger dealer. This will also apply to several other articles. The fault is sometimes with the railroad agents in permitting such classification, and partly the deception of the shipper in concealing the true character of the goods shipped so as to have them improperly classified.

Question 3. Please to present a statement in regard to the demoralizing and depressing effect upon trade of the cutting of rates or the deviation of rates from published tariffs by means of placing commodities in a lower classification, allowing rebate or drawback, under-billing, or any direct or indirect form of cutting or evading the terms of a published tariff. In this connection please to state any judicial decisions in which practices of this kind have been punished under the provisions of law relative to the obligations of carriers or under the provisions of any special statutory enactments in regard to rail rates.

Answer. Cutting of rates, paying rebates, changing of classification, or any other means, such as under-billing of actual weights, tends to rob the many for the benefit of a few, who get the benefit of such practices. For example, one person ships 12 tons of corn in a car when the rate is 35 cents per 100 pounds and it is billed at 10 tons; that car-load pays \$7 less charges than the published tariff, which enables the owner to undersell others, and by such means the honest shipper is excluded from the market for both buying and selling, so that the other purchases at a cheaper rate at the place of shipment until he controls entirely the market at both ends, to the exclusion of others and the injury of both the producer and consumer. Take another example: When freights are not moving brisk and the railroads want business, a sharper makes a secret bargain with one line for a drawback or rebate of 5 cents per 100 pounds from any rate given for 40 days for 500,000 bushels shipped during those 40 days. That is, 3 cents per bushel margin over any other shipper, which is \$15,000. He will start off and pay 1 cent per bushel more than any one else can, which gives him all the grain offered at the point of shipment. When his shipments are about all completed, his co-operator in New York commences to put up the price. Buyers see that the principal receipts are controlled by one firm, and they are putting up prices; a false speculation is started, and they by controlling receipts can advance the price 3 to 5 cents, say 3 cents. Now take net results as follows, viz:

Rebate from railroad company, 500,000 bushels, 3 cents.....	\$15,000
Less 1 cent per bushel paid more than the ordinary price.....	5,000
Gained from the railroad.....	10,000
3 cents advance in New York by controlling receipts.....	15,000
Net profit of.....	25,000

Result, \$25,000 net gain and the control of the market to the exclusion of regular, honest dealers who want to buy to fill a fair, legitimate demand from consumers. It may be said that equity to the large shipper should give him some consideration, but equity should then make a public declaration of the principle of recognizing the difference between wholesale and retail, and give every member of the community the same chance, instead of its being a secret bargain which excludes the public for the benefit of one man or firm. The evil effects of such a pernicious practice react upon the railroads themselves in this way: The lines finding shipments and markets controlled by one set of men over one line, find out the cause and start off to gain their share by a cut or rebate to their friends; but it is of no account, as the first man gets his 5 cents less than others, so that if rates go to 10 cents on other lines the contract calls for the same rate of 5 cents off. The direct result is to unsettle values, to disarrange and demoralize legitimate trade for the benefit of a few persons, who may be termed "scalp-

ers," who have all to gain and but little to lose. In regard to judicial decisions in such a special contract I would refer to a decision of the court, published in the Washington papers of February 20, against a steamship line that had made a contract and the contractor made other special contracts based upon it. The steamship line claimed that the property shipped belonged to other parties and formed no part of the freight contracted for; the court held the steamship company liable to pay the rebate. Railroad contracts of this character are made generally by a line agent by consent of the roads forming the route over which the property is to pass, the delivery road settling with the owner or agent for the entire line, and the amount is refunded in pro rata proportion to earnings. I know of no statutory enactments, other than the common law of the common carrier. I will speak of that more fully hereafter, under another head.

Question 4. Please to present your views in regard to the various forms of regulating rates adopted in the Western States, and particularly in regard to defects in those laws of an economic or commercial character tending to prevent the attainment of the objects which they were intended to reach.

Answer. The regulation of rates in the Western States is governed by circumstances that may occur from time to time. At the present time grain in store at Chicago and Milwaukee in large quantities intended to be held for export or for sale in New York in May can be contracted for at a given rate, including immediate delivery on vessel so as to cover storage and freight both, from the receiving it on board until its delivery in Buffalo. At such a time rail rates have to meet, to some extent, water competition and storage both; therefore rates should generally be lower at this time of the year than in the winter. The competition and demoralized rates in March, 1878, more than discounted the usual reductions, and we had an advance from all competing points on the 1st of April, which retarded immediate shipments by rail to some extent and gives the vessel-owners a better chance to fill their vessels at better rates for the first cargo on the opening of navigation; but as "all fools' day" is never expected to pass without some victims, this action seemed intended to furnish some by the absurd rates for March and the advance in the face of opening of lake navigation. At times great injustice is done to millers and other manufacturers by not understanding the nature of the business to be done; for example, from Kansas City to Toledo via short line is 37 miles less than via Chicago to Detroit, both places being common points with equal rates to the seaboard. Both places have large mills requiring Kansas wheat to make into flour for the New England trade. In the fall of 1877 the tariff from Kansas City to New England was 70 cents per 100 either via Detroit or Toledo. But the rate to Detroit was 46 cents and the product from Detroit to New England 31 cents, making a total of 77 cents, while the rate from Kansas City to Toledo recognized the difference in rail distance in favor of Toledo to 36, and then the common point rate from there was 31, making the two locals added 67 cents—3 cents less than the through; allowing 5 bushels of wheat to the barrel of flour Toledo would stand 15 cents per barrel less in the New England market than Kansas City and 30 cents less than Detroit, all three places making flour out of wheat from the same place, over the same roads, in the same market. Saint Louis claims the same rates east as Chicago, and the millers generally have a special rate, but during March, 1878, the rates went as low as 10 cents per 100 pounds from Saint Louis to New York, which, with the difference in the cost of the wheat, enabled Saint Louis millers to put their flour in New York about 60 cents per barrel less than Detroit and Toledo. Therefore, by the absurd and ruinous policy on the part of railroad agents, none of them having a dollar's interest either in the roads or the property, some of them with only a faint and dim idea of any commercial transaction at all, were ruining the business of 845 mills, and about \$20,000,000 worth of property in mills in Michigan alone, and at the same time sending the roads employing them headlong into bankruptcy; the end of which will be for them to fall into the control of the great trunk lines, then the reaction and monopoly that will defy opposition or control.

NOTE.—The railroad companies being creatures of State legislation, their local State business may be governed by the local laws of the State in which the business is confined. But as the great bulk of the business done upon the through lines is interstate traffic, which in my opinion is reserved in the Constitution for the United States Government to regulate, I cannot see that any State government can constitutionally legislate upon it at all. And as Congress has not provided a general law regulating such traffic, it seems to me that we have no laws at all other than the law of the common carrier that governs through traffic. The demands of commerce created the union of the States, and the power to regulate commerce among or rather between the several States is given to Congress without any limitation whatever. The business of railroading is a public business, and among the several States is an interstate business in which the people of all the States are equally and very deeply interested, therefore should have some general laws by which such interstate business shall be supervised by the public or United States over and above the several local laws of local State

governments. Why should not Congress regulate interstate traffic by rail as well as by water?

Question 5. Please to describe the position of the Grand Trunk Railroad with reference to the contest which has been going on for several years between the trunk lines for traffic between the West and the seaboard, stating the circumstances controlling the general policy of the Grand Trunk Railroad which have caused it to refuse to unite with the other trunk roads connecting the West with the seaboard, as to through or competitive rates.

Answer. The Grand Trunk Railway control the line from Portland to Detroit in their own right, which gives them an outlet in winter in connection with steamship lines for Europe. The very long haul renders them able to make such concessions as will give them a share of the business which they could not get at even rates with the shorter and more direct lines to Boston and New England. Therefore, if they went into the united arrangement at even rates, they would soon have no traffic. Even if they got a share of the net earnings from the other lines, there is no legal guarantee that after the traffic was secured the arrangement would not be broken up. In summer they have to compete with the lake and river navigation from all lake ports to Montreal and Quebec. Consequently they are compelled to meet a competition of their own, much stronger than any other rail line, which is separate and distinct from most other rail lines. To enable them to do so they have steamers running from Sarnia (Lake Huron) to the principal lake ports west, from which they can take property and insure by water. To make it equal to "all rail" and reach Liverpool and Glasgow and Northern New England cheaper than "all-rail" lines, they must compete with water to Ogdensburgh and the short-rail hauls from there to New England. Their summer rates with the connecting roads through New England must be reciprocated in winter, so as to make the arrangement one of mutual interest through the entire year. Without concessions the Grand Trunk could do but little in winter, which, if the trunk lines allow, gives an advantage which they are not ready to grant willingly, and in summer competition by water the entire distance to Montreal and Quebec, and even to Liverpool, compels it to make rates independent of the other trunk lines.

Question 6. Do not the reductions which have taken place in freight charges on the lakes and the Erie Canal during the last three years indicate that this water line is still and must continue to be a very effective regulator of rail rates?

Answer. The reduction of freight on the lakes and Erie Canal for the past three years is partly owing to an excess of transportation facilities on land and water in proportion to the property to be moved, and partly by the reduction of tolls on the Erie Canal by the State of New York. For grain, lumber, iron and copper, salt, and other kinds of heavy cheap freight, where the freight has to form a large part of the cost of the property, which is at lake port towns and cities in large quantities seeking a market at the seaboard cities, the lake and canal will have an effective influence upon rail rates for such property; but such property as is needed for ordinary use and consumption in a regular and uniform way, will be sent from the interior towns or places of production to the interior towns or places of consumption by car-load lots by rail without much regard to lake and canal rates, except in so far as the principal cities on the seaboard are affected, the rates to those central cities being very largely accepted as the common rates to New England and river and canal points.

Question 7. Do you recognize the fact that in any apportionment or pooling schemes which may be entered into by the East and West trunk lines the success of such arrangements depends upon the following circumstances: First, that the several lines shall have a well-defined common interest in the traffic apportioned; second, that the apportionment scheme must be limited to the particular commodity, or to certain specified commodities, or to the traffic from certain points to certain other points?

Answer. The apportionment or pooling scheme is but a movement forward toward the clearing-house plan, but cannot in its present shape become a complete success owing to a lack of any legal, binding, cohesive force other than good faith between the roads to allow the pooling agent certain discretionary powers which are not sanctioned by any general law nor guarded by a penalty, the exercise of such power being to deprive the citizens of all rights of choice and in some cases to great danger of the entire loss of property shipped. For example, a Chicago merchant may choose to ship from New York a car-load of silks or valuable goods via New York Central Railroad, so as to have a responsible road to pay for goods if destroyed in transit. The goods may be so marked and taken to the New York Central depot, but the only receipt that he can get is a "pool receipt" which permits the goods to go by any road in the pool. In case the shipper refuses to consent to this and demands a legal bill of lading according to the charter of the New York Central Road, they will then avail themselves of their right to give a legal local bill of lading to Buffalo, and charge the Buffalo rate, where a consignee or agent must pay charges, receipt for the goods, and cart them to the next road and get another bill of lading, and so on through each State of Pennsylvania, Ohio, Michigan, Indiana, and Illinois to reach Chicago in a legal way, subject to the reservations and restrictions of each State's charter through which the Lake

Shore, Canada Southern, and Michigan roads pass, notwithstanding Mr. Vanderbilt is president of and controls the whole of those lines from New York to Chicago. But by the "pool" bill of lading the agent may take these goods away from New York Central depot and give them to the Erie Railway to make up their average percentage of tons of first-class freight. If the goods are destroyed, then the claim may come against a bankrupt road that is in the hands of a receiver, subject to the order of the court with perhaps some millions of claims standing ahead of this one.

1st. The several lines agreeing upon the percentage of tonnage of each kind of goods or classification of goods to be carried from one commercial center to another commercial center, then the lines have a common interest in keeping uniform good rates between those centers. The total volume of each class being apportioned upon that agreed basis of percentage, is all that either should claim, whether the business is large or small as a whole.

2d. The apportionment scheme should be from certain points to certain points upon an agreed basis of percentage of classification of property, and not upon certain commodities, only so far as such commodities go to make up each class of commodities carried at one price per 100 pounds between the given points.

Question 8. Do you not think that the success of any particular apportionment scheme will be more likely to be attained by excluding traffic in which all the lines have not a direct and well-defined interest in common, than to include in it such uncertain traffic?

Answer. Traffic that is not defined as common to the roads, according to their percentage agreed upon, would not enter into the pooling arrangement at all. New York to Buffalo would only embrace New York Central and Erie roads upon their Buffalo percentage, while from Philadelphia or Baltimore to Buffalo would be between the lines out of those points and divided with New York Central and Erie at the junctions for Buffalo. If there is not a well-defined interest in common to all, then the percentage will be small on one line and large upon the other, and the agreed percentage is due to each, whether it is small or great in volume.

Question 9. In forming a pooling or apportionment scheme, what general principles regarding the economy of transportation or the interests of trade should govern?

Answer. Everything else being equal, trade and commerce between given points will take its proper, natural, and legitimate channel, according to the desires of the owners of the property. Therefore, by taking the average shipments, say for three years over each route, according to classification, you arrive at the basis of percentage carried by each as an average of that time. By adopting that percentage for future traffic would be generally a fair rule for the roads, and would be a fair indication of the requirements of the owners of the property; yet I hold that no owner of property should, by arbitrary force, be debarred from shipping his goods over the route he chooses. Should that right change the percentage for a short time, the roads could no doubt even it up from unconsigned property; otherwise, deduct the cost of hauling the excess over one road and pool the balance according to the agreed percentage of all.

Question 10. In your opinion, has the adoption of pro-rating arrangements, the establishment of through or fast freight lines, and the establishment of the various apportionment schemes tended to arrest the policy of the extension of lines under the ownership or control of one central railroad organization?

Answer. The adoption of pro-rating arrangements and the establishment of through or fast freight lines and pooling schemes, have had the effect of furnishing the public with increased facilities at a very great reduction of cost, while they have had a tendency to make the central or trunk lines seek closer relations with their connecting roads. Yet the purchase or leasing of such roads has been arrested more by the failure of negotiating securities to pay for them or the caution of the stockholders or directors to overload their main lines with more obligations than their creditors would carry for them. Therefore, the shorter road to gaining full possession of such connections is to crush them out through bankruptcy proceedings, or by sale of the bonds in default, with friends of the trunk-lines, or perhaps with parties in the interest of trunk lines, as the purchasers, the roads to be run then in a common interest. Should the time ever come, which may not be very far in the future, when the trunk lines can by themselves or through their friends control the lines between the principal Eastern and Western cities or centers of business, then trade and commerce will be at the mercy of a very few persons, who may not recognize the wants of the public as against their own, and, with the sad experience of failures and bankruptcy of other roads and the influence and power of those controlling the trunk lines, new roads would not or could not be built. Therefore, the public interest will be better served by Congress "regulating interstate commerce" over the roads as they are, rather than allow such commerce to run on at the will of the "pool agent" without any general law governing such traffic for the mutual protection of the roads and the people, until the evil is too great to be controlled for either, and the controlling power of the roads becomes a dangerous political power, which may in the end dictate the value of productions and the legislation of the country.

Question 11. As to what features of detail in carrying out the different apportionment schemes now existing in various parts of the country do such schemes embody the principles which you propose to incorporate in a general railway clearing-house system; and in what respects are the existing apportionment schemes operated in a manner not in accordance with your plan of a clearing-house system?

Answer. The apportionment scheme is only a matter of mutual understanding between managers of trunk lines, for the benefit of the lines only, subject to be broken up at any time at the will of one man or set of men, with no authority from any source on behalf of the people to see that the system is not abused or turned into a monopoly should it work for the interests of the roads. The clearing-house plan of mine contemplates a general law by Congress to regulate interstate commerce by railroads, in which the clearing-house system shall become a part, by which trunk lines and their connections may become members or not as they choose. Those roads that do become members will be legal members, subject to the rules and regulations of the clearing-house board. Thus the roads issue no through bills of lading or tickets to or from competing points except such as the clearing-house furnish. When goods are billed from one point to another, over a certain route or line, an impression copy of such bills would go to the clearing-house, where each road interested would be credited with their share of the earnings and the road at destination being charged with the full amount to be collected, the settlements of balances being made through the clearing-house with the freight auditor of each road. The settlements for passenger business will be made with the passenger auditors. Whenever a road is dissatisfied, they would be requested to state in writing the cause of dissatisfaction, which would be fully considered, and in case the difference could not be arranged, they can give notice of withdrawal at the close of the month following the one in which such notice is given. When such road is no longer a member of the clearing-house, it would become a local road, its tickets or bills of lading would not be received or honored by the other roads in the clearing-house system, its power for evil would be so small that the general system or business of interstate or competing traffic would not be felt at all. The making of rates would then be within the legal control of the clearing-house, no change being made without reasonable notice to all lines and the public. No cut-rate, rebate, or allowance of any kind to be made, except such as might be made public to all parties upon the commercial principle of recognition of the difference between wholesale and retail, upon a uniform basis of quantity shipped for one person or firm exclusively and not for any combination of persons or firms, in order to place all dealers upon an equal footing, provided their business was equal in amount during each month, or nearly so. Now, the pool agent only apportions the tonnage of the different classes of freight; the roads re-bill and collect back charges from each connecting road, and can, and no doubt do, pay drawbacks and rebates entirely outside of the connection or knowledge of the agent. They may bill to the end of their line local at the proportion of the through rate, so that when it is re-billed again at Buffalo or some other place, say Philadelphia, it takes the tonnage from such point, and does not come under the direction or knowledge of the pool agent at all; while under the clearing-house system, the through business and billing would be done under the direction of the clearing-house rules, and by their supervision and under their control, subject to the binding force of law and the inspection of a government commissioner or examiner, with penalty for violation of the regulations for such traffic. I have no faith in the stability of rates or the safety in business transactions for any long time that are effected largely by the cost of transportation, until the government take measures for regulating inter-State commerce.

ADDITIONAL.

My opinion is that there should be a "department of commerce" established, with a cabinet officer at the head, and have all business in all the other departments that are commercial in their nature transferred to it, such as the bureaus of agriculture, statistics, lake survey, &c., then add a railroad bureau, and make the roads send in a return of their monthly statements, separating the inter-State traffic from the local. I would also have telegraph lines, fire and insurance companies that are doing business in more than one State, report to that department, and have all our consuls to other countries report once a year or oftener the imports and exports of the countries to which they are sent, together with a schedule of duties upon such imports with the cost of transportation, as near as may be, from our principal seaport cities, by which we can know from a reliable source the probability of our extending and diversifying our commerce with other countries. If any obstructions are in the way, we can know what they are, and take proper steps to have them removed, where practicable to do so.

The appointment of railroad commissioners by State legislatures to look after the railroads in the State may furnish local information for such States. Such commissioners have no power or influence upon commerce carried over the roads from one

State through and into other States. *I hold that the State legislatures themselves have no constitutional power to legislate upon inter-State commerce passing through one State from another State in transit to a State beyond, any more than they have to levy duty upon goods going from one State into another. "To regulate commerce with foreign nations and among the several States and with the Indian tribes" forms a part of the duties delegated to Congress by the several States in the Constitution of the United States. Yet so far the United States Government has made no provision for "inter-State commerce" upon railroads by which the roads or the people have any protection of law for what constitutes about 90 per cent. of the entire commerce of the United States. To-day rates on railroads may be said to be agreed upon, and a verbal or written understanding had between railroad officials, property shipped under it in good faith paying fair living rates both to the railroads and the property owners. Next week railroad war may be declared, and the same class of property be carried at one-fourth the former rate, ruining the former shipper and the roads both. The citizens of the United States, property owners and railroad stockholders, are directly interested in having some general laws passed by Congress, giving the public some guarantee for stability in rates, as well as uniform bills of lading, that shall conform to law in all of the States alike, any action at law under inter-State commerce regulations to be brought in the United State courts instead of State courts. The exemptions in the charters granted by States or under the general railroad laws of separate States being applicable to State business over such roads within the State, and not to inter-State traffic in transit from one State into another, or through two or more States. Such a law should be distinct, clear, and comprehensive, fair and equitable for the railroads as well as for the people. Should we continue to be satisfied that these railroads are State institutions, chartered and regulated by local State governments? If so, how are we to reach the responsibility for conducting public business upon lines controlled by one manager or set of managers under one corporation that extends into eleven different States, with a traffic of eight and a half per cent. of the whole railroad traffic of the United States, and whose operations are second only the Government of the United States? Suppose questions of vital importance should demand to know this responsibility, would you search through the charters of eleven different States, with eleven different State legislatures, and eleven different sets of State laws, with the eleven different interpretations of exemptions and liabilities placed upon them by eleven different State courts? Or would you bring your claims under the State laws in the State where the loss occurred, with a bill of lading issued in some other State where the laws are entirely different, instead of one uniform law of Congress, which would clearly define some system under which inter-State commerce would be conducted in all parts of the United States under one system. To make the system effective, a national clearing-house law should be passed by Congress to regulate commerce between the States, and to relieve the through business from very annoying local State laws which affect inter-State traffic, such law to provide for returns by all railroad companies to the States in regard to their local traffic and to the clearing-house board in regard to their through or competing traffic; the general government to appoint special railway commissioners, charged with the duty of attending to the administration of the clearing-house laws. Such a system would enable the roads to carry on their competing business through a legalized system managed by themselves as members of the clearing-house, and at the same time it would enable the government to obtain information in regard to the inter-State commerce of the country, now practically ignored. There would be no danger of the clearing-house becoming a great monopoly, as Congress can fix a maximum rate for passengers and freight. The power to enforce the clearing-house system being derived from Congress, would be subject to Congress for its abuses of power for the roads as against the people, and at the same time give the means of enabling the roads to correct the abuses among themselves, which at present is equally damaging to both the public and the roads, producing little or no profit for capital invested in roads, while they have the power to build up or destroy the profits of commerce by unsettled and demoralizing rates, made oftentimes by men of no commercial knowledge of the effects such actions have upon trade and commerce. Some change must be made. This appears to me to be the best, if properly organized and carried into effect, with proper management under the rules and regulations authorized by Congress. The appointment of a board of arbitrators by the trunk-line roads cannot accomplish any very marked change, as they have no legal authority to do anything for or against the roads or the public. Anything they may do is only delegated to them by certain individuals representing roads only. The people have no power over them. Their decisions have no binding effect or stability for continuance of rates or uniformity of action. They are not responsible to the public at all.*

Letter addressed to the Chief of the Bureau of Statistics by J. D. Hayes, Esq., of Detroit, Mich., in regard to the evils attending the practical workings of certain railroad pools.

DETROIT, January 28, 1879.

JOSEPH NIMMO, Jr., Esq.,
Chief of Bureau of Statistics:

DEAR SIR: Referring to yours of 24th instant covering the inclosed paper, I would say: The subject of "discriminating rates" is one from which very much of our trouble comes both to the railroads, and the shipping and commercial interests; one which I claim is beyond any control of the States which granted the charters of the roads, and outside of any national laws "regulating commerce among the States," and entirely outside of any known principle of legitimate commerce among nations, and has no bearing whatever upon our trade balances between this country and other nations as a rule.

First. There is not produce enough raised east of Ohio for the maintenance of the population of the Eastern section of this country alone, therefore rates from points west of Ohio only tend to equalize prices to some extent for our own people east of Ohio. What the public, which includes the several sections of several States, complain of is the unrestricted power of a "pool agent" or a general freight agent of some road to destroy one set of men and build up another set without any just reason for doing so, thereby placing the business of the community in peril without the knowledge or consent of those that suffer their wrong doing, owing to there being no inter-State law to prevent its being done. This, being rather a bold ground of assumption, may require some demonstration, which I will give as follows, viz.:

A has bought 100 car-loads of wheat in the advance elevator at East Saint Louis. The pool rate is 35 cents per 100 pounds to New York, say:

40,000 bushels, 2,400,000 pounds, at 35 cents, freight	\$8,400
Cost of the wheat is, F. O. B. (free on board)	40,000

To cost in New York	48,400
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The advance elevator stands upon the Chicago and Alton Railroad track. That company own the road and control its tracks to and from that elevator. The owner, being a miller, calls for his wheat to keep his mill running; there is plenty of empty cars and the road is willing and anxious to get the wheat off, but the pool agent says, no; the Chicago and Alton Railroad have carried more than their percentage in the pool, therefore they cannot carry any more through (New York) business at present. No other road can send cars to that elevator; therefore storage, insurance, interest, &c., accumulate at that point, while the mills remain idle in another State, under heavy expense, their customers being compelled to make purchases from other mills, until the action of the pool agent in one State has nearly destroyed the interest of the miller in another State. Then, when permitted to carry the wheat, it is pushed out all at once, and rushed forward much faster than it can be ground or handled at the mill, and after the customers have gone somewhere else for their flour. Just at that time a break in rates occurs and large contracts are made upon the basis of 25 cents per 100 pounds, and another miller alongside the first one gets 40,000 bushels, prompt shipment, at the same cost for the wheat. See how these two millers stand upon the same quantity of wheat, from the same place to the same place, at the same original cost of wheat, sent over the same roads, and both sell their flour at the same time, at the same price:

First. Ten cents difference in freight, 2,400,000 pounds	\$2,400
Insurance, interest, storage, say	100
Ten days' loss of time, with help which could have run the mill as cheap as to remain idle	2,000

The first shipper pays out	4,500
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more than the other, or equal to 50 cents per barrel on 9,000 barrels of flour which both lots of wheat would make, from the same place to the same place, over the same roads, simply because a pool agent, without authority of law, can stop a common carrier of inter-State commerce carrying more than their *percentage* of a pool arrangement, in which the owners of the property have no voice whatever. The charter of the road, as a State charter, does not have the power to make them carry *inter-State* commerce, and which the Government of the United States have so far failed entirely to provide laws to regulate such inter-State commerce for the protection of the citizens of the several States.

Second. The through or *foreign commerce* depends entirely upon supply and demand and the ability of this country to fill the demand as compared with other countries, "the balance of trade" being largely made up by circumstances entirely beyond and outside of anything done by railroads or their freight rates made in this country. Take the article of wheat, which to-day is worth only 96 cents at Detroit. The breaking out of war in Europe, or the evidence of a crop failure either abroad or at home, might create a *speculative demand*, with large exports, at, say, 50 per cent. advance.

The very same property would increase our "trade balance" just that much without any increased demand or capacity for carrying the property either by land or by water. Now, you can see from your own figures that our balance of trade has been very, very largely in our favor for the past three years; but if you compare the quantities and prices obtained for wheat, flour, cotton, provisions, &c., you will see that it has been the money value put upon them and not the large quantity shipped that has gone to make up the amount, while this year the rates from the West to the seaboard have been generally higher and the value of all such productions have been very much lower, showing that values of property have but little or no effect upon freight rates. Neither does any material reduction of freight rates have very much, if any, influence to move the property forward *as a whole*. Special shipments may be made as an inducement for special or cut rate, but such special shipments and rates only tend to unsettle values, by giving one set of men an advantage over others for a time, when such rates either become general or else peace is arranged and uniform rates are again established after the contract is accepted or carried out which enables one shipper to gain an unfair advantage over others to the disadvantage of other shippers and the positive loss of the difference in freight earnings by the railroad companies. The following shows why certain roads break rates:

"COLLAPSE OF THE PEORIA FREIGHT POOL.

"CHICAGO, January 27.—The Peoria freight pool, which for the three months since its formation has had only a nominal existence, has been completely broken up by the resignation of the commissioner, J. H. Stead, and does not now exist even by name. The prediction is made that since the pool on freight from Western points to the seaboard, which was lately so carefully elaborated, has been ignored by most of the roads, it will become entirely inoperative by February."

"The roads east from Indianapolis, Saint Louis, and other Western points, that had broken the tariff rates, having now made all the contracts they need to carry them successfully through the winter, restored them again last Saturday."

And I will show you the effect upon commerce, viz: Suppose, as I have reason to believe is true, a shipper will contract from some point 500,000 bushels grain on a 10 cents' rebate from regular rates. That amounts to 6 cents per bushel, or a rebate off from railroad earnings of \$30,000. The first effect being to enable the contractor to pay, say, 2 cents per bushel more for the wheat to control his purchases, and when the whole 500,000 is shipped out, they being the principal owners, the New York consignees are advised to bid up the price in New York. All holders of grain in store in New York will aid in this movement as the restoration of rates by the railroads will enable them to do so. They advance the market, say, only 3 cents. Now see results:

Drawback on 500,000 bushels, 10 cents per 100 pounds.....	\$30,000
Advance in New York by being able to control market, which all owners at New York aid in.....	15,000
Total receipts over even market.....	45,000
Less paid out at the West to control purchases and as a basis for the Eastern advance, 2 cents	10,000
Operator has gained by being favored.....	35,000

by his cut rate while the whole legitimate business of milling must stop or do business at a ruinous loss while this *illegitimate* and *unfair speculative* business is being done through the aid of the railroad companies at a loss to themselves and a positive damage to commerce at large. Now go further and apply the same system to foreign shipments on that same quantity of wheat.

The advices received at the Produce Exchange yesterday gave the rate from Chicago to New York at 25 cents per 100 pounds on grain and provisions, which is 10 cents off the schedule rate. Contracts are being freely taken by the roads at that figure.

It was also stated by persons, well informed, that through freight from Chicago to Liverpool, by way of Baltimore, was being taken at 53 cents per 100 pounds. This "cut" is about 20 cents under the schedule rate. It was also claimed that shippers would be able to get contracts at 50 cents if the Baltimore and Ohio Road had enough cars West to handle all the freight offered.

500,000 bushels, Chicago to Liverpool, at 50 cents per 100 pounds	\$150,000
Take the same weight of flour made at Chicago:	
150,000 barrels, Chicago to New York, at 70 cents	\$105,000
Steamer charges, New York to Liverpool, averaging 3 cents or 5 per cent., say 75 cents per barrel.....	112,500
Same weight flour costs.....	217,500

or \$67,500 more than the same weight of wheat from the same place to the same place, over the same roads, discrimination against *flour*, the product of wheat. The effect of this discrimination is taking the *manufacturing* interests from the *United States* and transferring them to Europe *at our own expense*. Yet this is being done through the action of a few freight agents, most of whom have little or no knowledge of "trade and commerce," nor any interest in the roads or property of this country. The time should soon come when the working of our great transportation lines will be conducted upon business principles by those who can fully understand and appreciate the value of commerce to this country and not "give us away" to speculators and foreign manufacturers who measure the price to their customers at what it will cost us to supply them with the manufactured article from the United States, as our supply regulates the price of what they demand.

Yours, truly,

J. D. HAYES.

APPENDIX No. 12.



INFORMATION FURNISHED BY HON. HAMILTON A. HILL, OF BOSTON, IN
REGARD TO THE COMMERCIAL AND TRANSPORTATION INTERESTS OF
THAT CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE
CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

Question 1. Please to state the policy now pursued by the State of Massachusetts as to the management of its interests in the Hoosac Tunnel Line.

Answer. The Troy and Greenfield Railroad, or the Hoosac Tunnel Line, is managed by the State. It is in charge of Mr. Jeremiah Prescott, as general manager, who acts under the direction of the governor and council. It is operated on the "toll-gate plan," that is to say, a fixed charge is made on every passenger and on all freight transported upon it, and all connecting roads are, and are to be, treated alike in their business relations with it. Many of us believe that the existing plan is not the best one, certainly, for the permanent management of the Tunnel Line, and for the largest development of its capabilities, and are looking forward to the time when some corporate combination shall be formed between Boston and Lake Ontario, of which the Tunnel Line shall be an integral part. An effort was made during the last session of the Massachusetts legislature to carry a constitutional amendment, to be submitted to the people, providing that the Tunnel Line should never be alienated from the State, except after a popular vote authorizing and permitting it. The house agreed to this proposition (I, myself, voted against it) by a large majority, but it failed by a decisive vote in the senate. The present plan of management will undoubtedly continue in force for the present. In the mean time the Tunnel Line is a perpetual source of expense to the State, and the care of it is too much complicated with questions of State legislation and with our local politics.

Question 2. Please to state as briefly as possible the amount of money which the State of Massachusetts has already invested by various modes in different railroad projects, viz., in the form of loans secured by mortgage, of subscription to the stock of roads, or of direct expenditure for construction. Please also to state the degree of success which has followed each one of these different plans of granting State aid.

Answer. The Commonwealth of Massachusetts has granted aid to various railroad corporations, as follows:

1837. Norwich and Worcester Railroad	\$400,000*
1837. Andover and Haverhill Railroad	100,000*
1837-39. Eastern Railroad	500,000*
1838-41. Western Railroad	3,999,555*
1838-41. Western Railroad, subscription to stock	1,000,000
1838. Nashua and Lowell Railroad	50,000*
1839. Boston and Portland Railroad	50,000*
1839-40. New Bedford and Taunton Railroad	100,000*
1857-77. Troy and Greenfield Railroad and Hoosac Tunnel	14,139,972
1869. Boston, Hartford and Erie Railroad	3,599,024

The loans in the above list marked thus * have been met by the companies to which they were made respectively. The State holds the stock of the Western, now the Boston and Albany Railroad, and it is a good paying investment. Whether anything is to be received back from the enormous investment in the Tunnel Line remains to be seen; this property belongs to the State. For the heavy advances made by the State to the Boston, Hartford and Erie Railroad, it holds stock in the New York and New England Railroad, the corporation which has succeeded to the franchises of the Boston, Hartford and Erie Railroad; this stock to-day is worth from 30 to 35 cents on the dollar; when the road is completed some of its friends predict that the stock will be worth 50 cents on the dollar. There is a sinking fund which will take care of the principal of the loan (\$3,599,024) at maturity. But for the annual payment of interest by the State (\$180,000) the tax-payers of the commonwealth will receive nothing, by way of reimbursement, except what may some day come from the sale of this stock.

Question 3. Please to describe the western connections of the Hoosac Tunnel line, and state what opposition the managers of that line have met from rival lines in efforts to secure western connections. Please to state also what new roads are being

constructed and what connections are being formed in order that the Hoosac Tunnel line may become a direct competitor with the Boston and Albany line and its western connections, and with the Vermont Central line and its western connections.

Answer. The only present direct western connection of the Tunnel Line is the Troy and Boston Railroad, which runs from the Massachusetts State line to Troy. This piece of road is owned by New York parties—Mr. Vanderbilt and others—and is managed in the supposed interest of the New York Central Railroad. The managers of the Tunnel Line can make no through freight arrangements between the interior and the seaboard, except with the sanction of those who represent New York interests. This forbids their making any advantageous connections with the other trunk lines, and with the Erie Canal at Schenectady. A company (the Boston, Hoosac Tunnel and Western) has been organized, which is now building a line to unite the western end of the tunnel with the Erie Railway and the Erie Canal at Schenectady. The Troy and Boston Railroad Company has sought in every way to prevent the construction of this line, but it has received no assistance to this end from the New York legislature or judiciary, while the legislature of Massachusetts, during the session of 1878, passed an act designed to thwart its selfish efforts to maintain a monopoly and to control the traffic at the western terminus of the Tunnel Line. The Massachusetts Central Railroad has been projected, and will shortly be completed, giving Boston another connection with the Troy and Greenfield Railroad and the tunnel. It will reach the city by the Lowell Railroad Company, using its new passenger station and its Charlestown wharves.

Question 4. Please to describe the railroads now projected, or in course of construction, the object of which is to give to Boston an independent connection with the anthracite coal regions of Pennsylvania and with the Western States. In this connection, please to state briefly what action the State has taken in regard to affording aid to such line or lines.

Answer. The New York and New England Railroad (formerly the Boston, Hartford and Erie Railroad) is completed to Waterbury, in Connecticut, and a good deal of money has been expended on the extension from Waterbury to Fishkill on the Hudson. On the completion of this part of the line, a new and valuable connection will be opened between Eastern Massachusetts and the coal regions of Pennsylvania. The terminal point of the Pennsylvania Coal Company on the Hudson is directly opposite Fishkill, and the Delaware and Hudson Canal Company comes to Rondout, a point just above. This latter company can discharge a ton of coal at Fishkill almost as cheaply and as well as at Rondout, the difference of expense being only 3 or 4 cents a ton. Rondout is the nearest point to which coal can now be brought by water from the mines, and chutes are in full working condition there to the extent of a million and a half tons a year. In my answer to the second inquiry, I have said that this road has received aid from the State of Massachusetts to the amount of more than three and a half millions of dollars. At the session of the legislature in 1878 a strong effort was made to secure an additional advance of \$6,000,000 for the purpose of giving the company (by the lifting of a mortgage) possession of the Providence, Hartford and Fishkill line, and for completing the road to the Hudson. The proposition for this new advance of the credit of the State failed by a very large majority.

Question 5. Please to present such facts as may occur to you showing historically the growth of steam navigation between Boston and Europe during the last eight years, stating when each line was formed, its nationality, and the aggregate tonnage of each line.

Answer. About eight years ago, the Cunard Steamship Company, which had withdrawn its mail-steamers from the Boston route, and had been sending freight-steamers to Boston, which proceeded to New York for their return cargoes to Liverpool, reopened a direct communication on the return voyage between Boston and Liverpool. Beginning with a fortnightly service, the ships soon made weekly departures from either side, and with occasional suspensions, this weekly service has been maintained. The success of the Cunard Company, under its able and indefatigable agent, Mr. James Alexander, in thus developing the export trade of Boston, led the Messrs. Leylands of Liverpool to put on a line of steamers of three or four thousand tons, of large carrying capacity, and good speed, and these ships, five or six in number, maintain a weekly service. Messrs. Warren & Co., of Liverpool, also maintain a bi-weekly service with ships of large carrying capacity, and there are other steamers, not belonging to established lines, which visit the port from time to time. On the average, it may be said that in 1878 there were three arrivals at and three departures from Boston every week of large steamers in the direct Liverpool trade. The number has still further increased in 1879 to an average of an arrival and a departure every day of the week.

Question 6. Please to state to what extent the Boston and Albany Railroad, or any other railroad leading into Boston, is identified with ocean-steamer lines between Boston and Europe, and what special favors are now granted by the several railroad companies to such steamer lines.

Answer. The trunk-railroad companies and the various steamship lines just referred

to co-operate in a friendly manner in promoting the shipping trade of the port of Boston; but I do not think that any one railroad company and any one steamship line can be said to be identified with each other, any further than that they may unite in fixing a through rate between the West and Europe, and in issuing a through bill of lading for through freight.

Question 7. Please to state the facts as to the ownership and capacity of grain elevators at Boston; and state the facilities for direct transfer of grain from cars to vessels, and also whether grain is usually spouted from the elevator into ocean steamers or transferred to them by means of floating elevators.

Answer. The following elevators are at deep water, and ocean-going vessels load at them: East Boston, Boston and Albany Railroad Company, 1,000,000 bushels; city proper, Constitution Wharf, 100,000 bushels; Merchants' elevator, 100,000 bushels. Most of the foreign steamers load at these elevators, but there are one or two floating elevators. The following elevators are used for the local business: Boston and Albany Railroad Company, 500,000 bushels; Boston and Lowell Railroad Company, 150,000 bushels; Somerville elevator, 50,000 bushels.

Question 8. How does the aggregate tonnage of ocean freight from Europe to Boston compare with the aggregate tonnage of ocean freights from Boston to Europe?

Answer. At the present time the tonnage from Boston to Europe is considerably in excess of that from Europe to Boston.

Question 9. Have rates been made during the last year between points in the interior and points in Europe, or between ports in Europe and interior cities in the United States, which discriminate against the trade of Boston? The discrimination referred to is that which arises from making the rate on such direct exportation or importations to and from interior points less than the sum of the rates between Boston and Europe, and of the rate between Boston and interior points.

Answer. Rates have been made during the last one or two years on through freights at lower rates than the sum of the regular railroad and steamship rates.

Question 10. Are such through rates between the West and ports in Europe for less than the sum of the rail and ocean rates regarded by Boston merchants as discriminations against the trade of that city?

Answer. The through rates just referred to do discriminate somewhat against the ordinary trade of the city. I do not think, however, that there is any disposition to find fault with them on the part of the merchants, as they are seen to be essential to the maintenance of the ocean steam commerce of the port. So far as relates to the export of flour and grain from Boston, it should be said that a rebate is made, even when the flour and grain do not come to Boston, in the first place, for shipment abroad. The amount of this rebate, however, is not quite enough to equalize the rate with what it would be if the property arrived on a through bill of lading for immediate exportation, the difference being the usual difference on merchandise coming from the West to Boston and to New York.

Question 11. Are the steamer lines between Boston and Europe to any extent purchasers of grain or any other merchandise for the purpose of making up cargoes; and if this practice exists, has it been objected to by the merchants of Boston as being prejudicial to the trade of the city or of the interests of trade generally? This view has been advanced in certain quarters and it is a question which points to the line of demarkation which should be observed between the operations of the carrier and of the merchant.

Answer. I do not think that the steamers sailing from Boston to Liverpool are carrying grain on owners' account, or that they have occasion to do so. When the Cunard vessels began to return direct in 1870 and 1871 it was found necessary to purchase grain to complete their loading, but this was only temporary. Of course, circumstances may arise from time to time when it is for the interest of the ship that purchases be made on ship's account; she must sail at a fixed date, and she must go full if possible. This used to happen with the old sailing packets which plied between New York and Boston and European ports. It was often necessary for the owners to buy heavy freight for purposes of ballast. The same will be true sometimes with steamers; but usually it is for the interest of all concerned that on regular lines the public should furnish the cargo and the company the carrying capacity, and so the agents and owners of ocean steamers generally regard it.

Question 12. Do the rail rates which prevail between Boston and the West operate favorably or adversely to the commercial interests of Boston? In this connection, please to state any facts of interest in regard to special rates on grain for export at Boston.

Answer. It is difficult to say whether the rates which have prevailed during the last year or two between Boston and the West have benefited the trade of the city to any extent or not. The export business of the port has undoubtedly been increased; the export of wheat has been largely in excess of any previous year.

Question 13. Referring to those marked discriminations on west-bound traffic which have at certain times prevailed in favor of Boston as against New York, please to

state whether such discriminations produced any permanent benefit to the commercial interests of Boston. 1st, with respect to the shipment of domestic goods to the Western States, and, 2d, with respect to the shipment of foreign goods to the Western States.

Answer. I do not believe that the discriminations referred to in the inquiry have produced any permanent benefit to the commercial interests of Boston. Probably they were not of the importance which would appear from the agitation in commercial circles in New York in reference to them. A few goods came back from New York to Boston to be forwarded to the West, but only a few, as I am assured by intelligent parties.

Question 14. Please to describe the Boston pool or apportionment scheme.

Answer. The Boston pool and apportionment scheme is really a ramification of the New York scheme. It embraces the Vermont Central, the Boston and Albany, the Hoosac Tunnel, the Erie, the Pennsylvania, and the Baltimore and Ohio lines. It is under the direction of Mr. Albert Fink, and it does not include east-bound traffic. New York is headquarters for this arrangement. The object of the arrangement is to equalize the business among the several lines, and to prevent the disturbance of the rates by cutting. It does not include freight bound east. In the main, harmony has prevailed and rates have been maintained among the competing Boston lines since the establishment of the pool and apportionment scheme.

Question 15. Please to describe the various lines competing for the trade of Boston with the Western and Northwestern States.

Answer. The various competing lines between Boston and the West are as follows:

1. The Grand Trunk Railway, by steamboat or cars of the Eastern Railroad to Portland, and thence by Montreal to Canada and all the West.
2. The Vermont Central line, by the Lowell, Vermont Central and Ogdensburgh Railroad to Ogdensburgh, connecting at Ogdensburgh with the Grand Trunk Railway at Prescott, and with a line of steamers for all lake ports.
3. The Hoosac Tunnel line, by the Fitchburgh, Vermont and Massachusetts, Troy and Greenfield, and Troy and Boston Railroads to Troy, connecting there with the New York Central Railroad for the West. Another line will be completed soon from the Hoosac Tunnel to Schenectady, connecting at Schenectady with the Erie Canal and the Erie Railway.
4. The Boston and Albany Railroad, connecting at Albany and Troy with the New York Central Railroad for all parts of the West.
5. The New York and New England Railroad, when completed, will connect with the Erie Railway at or near Newburgh.

The following steamboat lines run coastwise from Boston:

1. To Portland, daily, connecting with line to the British Provinces.
2. To New York (Metropolitan Steamship Company), three times a week, connecting with the Erie Railway for all points in the South and Southwest.
3. To Philadelphia, twice a week, connecting with the Pennsylvania Railroad.
4. To Norfolk and Baltimore, twice a week, connecting with the Virginia and Tennessee and the Seaboard and Roanoke Railroads for the South, and with the Baltimore and Ohio Railroad for the West and Southwest.

APPENDIX No. 13.

INFORMATION FURNISHED BY MR. SIDNEY D. MAXWELL, SUPERINTENDENT OF THE CINCINNATI CHAMBER OF COMMERCE, IN REGARD TO THE PRESENT CONDITION OF THE MANUFACTURING INDUSTRIES OF CINCINNATI, AND THE CINCINNATI SOUTHERN RAILROAD, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

CINCINNATI CHAMBER OF COMMERCE,
Merchants' Exchange, September 20, 1879.

MY DEAR SIR: I send you herewith my reply to your request for a brief statement of the manufacturing industries of Cincinnati, the value of their products during the year 1878, and of the area within which such products are sold.

Yours, very truly,

SIDNEY D. MAXWELL,
Superintendent.

Mr. JOSEPH NIMMO, JR.,
Chief of Bureau of Statistics, Washington, D. C.

The present condition of the manufacturing industries of Cincinnati is of the most favorable character. Safely emerged from a long period of shrinkage in values, of severe competition and undue production throughout the country, this city finds its industrial interests in all their ramifications in a condition to enter immediately and fully upon the improved condition which on all sides is apparent. No part of Cincinnati's enterprises has been permanently damaged by the long financial strain. The city has borne losses and endured privation, but this has not impaired her usefulness in any sense. Possessed of ample capital, enterprising and educated manufacturers, and skilled artisans, with manufactures of great variety and of wide distribution, situated in the midst of a district singularly rich in iron, coal, grain, timber, hogs, cattle, sheep, flax, tobacco, and other raw materials, and accessible to cotton, there is every reason why, in the new era of industrial activity which has dawned, Cincinnati should enter on a period of her business life which will far exceed in its results anything which she has ever before accomplished. At present the greatest activity prevails in nearly all of her important departments of production, and in such as may not be fully participating in the renewed business, there are the most indubitable evidences of an improved condition. Manufactories are generally running to their full capacity, and in many instances they have orders largely ahead. The products of Cincinnati's manufacturing industries for the year 1878, according to the figures of J. F. Blackburn, Esq., secretary of the Board of Trade of this city, aggregated in value \$133,736,165. To produce this, 5,272 establishments were in operation, 67,145 hands were employed, cash capital to the amount of \$57,509,215 was invested, and real estate valued at \$45,245,687 was occupied. The number of establishments engaged and of hands employed was the largest in the history of the city, and it is a noticeable fact that the value of the manufactured product exceeded the preceding year \$3,612,397. Not only so, but the year, in the value of its production, fell but \$7,675,189 behind the year 1875, when Cincinnati manufactures, at much higher prices, produced the largest aggregate value in their history. When it is remembered that since 1875 the shrinkage in value has been immense, and that in all departments the present product of the city of equal value must far exceed in actual results that of four years ago, the progress which Cincinnati has made in production, even in times of general commercial distress and industrial depression, must be apparent to the most casual observer. Of the entire production for the year, iron and other metals contributed \$19,391,164; food, \$22,032,161; liquors, \$24,531,726; wood, \$12,940,424; clothing, \$11,966,962; leather, \$3,993,075; soap, candles, and oils, \$3,525,427; printing and publishing, \$4,952,200; tobacco, \$4,371,527; paper, \$4,210,447; drugs, chemicals, paints, &c., \$4,031,700; carriages, cars, &c., \$3,524,199; stone and earth, \$2,332,937; cotton, wool, hemp, &c., \$1,418,000; fine arts, \$578,690; book-binding and blank books, \$578,000; and miscel-

laneous products, having no general head under which to appear, \$4,097,146. These products are widely distributed. They go largely to all parts of the United States, particularly to the West and South, but are by no means limited to this country. Every nation in Europe now receives Cincinnati manufactures, while China, Japan, India, Australia, South America, Mexico, Sandwich Islands, British Columbia, and the West Indies furnish markets for them in important classes. There never has been a time when the manufacturers here could produce so economically, when they have been more hopeful as to the future, or when the important bearing they were to have on the future growth and prosperity of the city was so clearly revealed.

THE CINCINNATI SOUTHERN RAILWAY.

In my report on the Cincinnati Southern Railway, submitted to the department in 1878, allusion was made to the enactment of a law by the Ohio legislature authorizing the trustees to receive proposals for finishing the road from Somerset, Ky., to some point on a line of railway of the same grade leading to Chattanooga. It was understood that this point meant Boyce Station on the Western and Atlantic Railroad, six miles from Chattanooga, and it was provided that if proposals from acceptable parties to complete the work for a sum not to exceed \$2,000,000, including \$50,000 which was authorized for terminal facilities at Cincinnati, then the question of the further use of the credit of the city to this amount was to be submitted to the qualified voters. In pursuance of this authority satisfactory proposals were received, and the question of the issue of \$2,000,000 bonds was submitted at an election held on the 14th day of August, 1878, 16,224 votes being cast in favor of the proposition and 10,425 votes in opposition. A contract was subsequently concluded with Messrs. R. G. Huston & Co. providing for the completion of the road from Somerset to Boyce Station, a distance of 172.7 miles, including necessary repairs to the road-bed and masonry, the erection of water and fuel stations, depots, section and tool houses, the laying of track, and erection of the superstructure of all bridges, save those over the Cumberland and Tennessee rivers, which were already finished, the contractors agreeing to take the iron and steel rails and cross-ties which the trustees had previously purchased. The sum named for the completion of the work was \$1,671,998.11, though this, on account of the calculations being based on the estimates of the engineer of the trustees, is liable to some modification. The time originally named for the completion of the work was the 20th day of August, 1879, which was subsequently changed to the 10th day of December following. Since the contract was made work has been proceeding at both ends of the unfinished part of the road, 52 miles of track having been laid to June 1, 22½ miles of which were put down in May. There is now good reason to expect that the work will be so far progressed by the 10th of December next as to allow the running of trains regularly between Cincinnati and Chattanooga, a distance of 336 miles, thus substantially completing a great public improvement to which the eyes of more than one generation have in various ways been turned.

As to the operation of the completed part of the road, I wish to add that on the 9th day of September, 1878, the trustees gave notice to the Cincinnati Southern Railway Company, who had been operating the road under a license to which reference was made in my preceding report, that they would terminate the license on the 12th day of March following. Subsequently there was a temporary arrangement made between the parties by which the company was to continue the operation of the road for the time being, the original terms, however, being so far modified as to provide for the allowance to the company of 8 per cent. per annum on the capital stock instead of 10 per cent. per annum as originally agreed on. On the 26th day of April a determinable license was granted by the trustees to E. W. Woodward and associates, consisting mainly of prominent business men and capitalists of this city, to run the road between Cincinnati and Somerset, and provision was made that the trustees should extend the license to other parts of the road as the same should be finished out of their own funds. The new company acquired the franchise of a company organized under the common-carrier law, at the time the former license was granted, the organization being known as the Cincinnati Railroad Company. By the terms of the license the new company is to provide equipments and operate the road, and is to receive, in consideration of the same, interest on the amount of capital actually paid up, at the rate of 7 per cent. per annum. The company has a subscribed capital of \$1,000,000, of which there has been paid in \$300,000. The remainder of the capital stock is to be paid, in the discretion of the trustees, as the necessities of the road may require. This license, besides securing the running of the road at a less rate of interest on the capital required for this purpose, gives the trustees a larger oversight in the management than was accorded by the terms of the former license, thus affording increased protection to the city's interests. The formal transfer was made to the new company on the 21st day of May, 1879, at which time the rolling-stock and other property of the old company were received, in pursuance of the terms of the former license, on the payment by the new company, which then assumed the management of the road, of the sum of

\$332,332.85, this being the capital stock of the old company. The agreement between the parties provides that the license "shall continue until six months after the completion of the whole line of the Cincinnati Southern Railway, and the lease thereof for a term of years to said company or other parties, or a sale thereof when the same shall terminate; but the said trustees shall have the right, at any time after eighteen months from the date hereof, to terminate this license upon serving written notice of their intention so to do at the principal office of said company, six months before the day fixed in said notice for the termination thereof."

The trustees have recently acquired the right of way across a part of Mill Creek Valley and are now constructing a track over the same, by which a connection will be made with the Cincinnati and Baltimore Railroad, thus bringing the Southern road into immediate connection with the entire railroad system of the western part of the city. Arrangements are pending for the laying of an additional track on the Marietta and Cincinnati and Indianapolis, Cincinnati and Lafayette Railroads to their depots in the interior of the city, as well as to the united railroads' stock-yards. The proposition to build a grand union depot in the vicinity of Central avenue and Pearl street is again receiving large attention, the parties immediately interested being the Cleveland, Columbus, Cincinnati and Indianapolis Railway, Marietta and Cincinnati Railroad, Indianapolis, Cincinnati and Lafayette Railroad, and Ohio and Mississippi Railroad. To this depot, if erected, the Southern road, if it desires, may be admitted.

As to the future prospects of the business of the road and its favorable influence on the interests of the city, nothing was said in the previous report which may not be repeated now. The trial thus far has been entirely of a local nature, having been confined to that part of the road lying between Cincinnati and Somerset, a distance of 157 3 miles, and during a part of the period not under circumstances calculated to fully indicate what benefits may be expected from the development of local business along the line of the road. I append, herewith, a table prepared by Capt. Robert S. Pomeroy, auditor of the Cincinnati Railroad Company, showing the number of passengers and tons of freight carried north and south, and the passenger and freight earnings each way monthly, from the opening of the road until March 1, 1879, together with the aggregate earnings, operating expenses, and net earnings for the same period, and the total amount paid the trustees from the opening of the road to both January 1, 1879, and April 1, 1879. It will be seen from this statement that the earnings from July 23, 1877, to March 1, 1879, aggregated \$735,854.77; the operating expenses, \$267,556.97; and the net earnings, \$468,297.80. The amount paid the trustees by the Cincinnati Southern Railway Company from July 23, 1877, to January 1, 1879, was \$363,596.63, while to April 1, 1879, the sum reached \$412,661.86. In explanation of a part of these figures, it should be stated that out of the amount which has been paid the trustees they have maintained the finished part of the road, and have reserved to themselves the right to reimburse the fund for building purposes for the amount which was expended in repairs between the times when the finished parts of the road were received from the hands of contractors and the opening of the road for business. Thus the money derived from the operation of the road which has thus far gone into the hands of the trustees has been appropriated to the benefit of the road, and has not reached the city treasury, so that as far as relief from the taxation incident to the building of the road is concerned, none has, thus far, been experienced. It is noticeable that the freight carried over the road during the six months ending March 1, 1879, aggregated 81,455 tons, in comparison with 52,058 tons in the corresponding period of the previous year, and that the aggregate earnings from all sources for the same periods were \$246,241.41 and \$200,524.38, respectively, showing an increase in freight tonnage of 56 per cent. and in aggregate earnings of 22 per cent. For the same periods it may be interesting to note the relation of the north and south bound traffic separately. The aggregate earnings from passengers and freight north for the last six months were \$149,448.36, in comparison with \$125,934.01 for the corresponding period of the previous year, exhibiting an increase of over 18 per cent., while the aggregate earnings for the same periods on southbound business were respectively \$96,833.05 and \$74,590.37, showing an increase of over 29 per cent. This increase, too, was confined to freights, for the passenger business, with the inducements removed which novelty afforded during the early months of the business of the road, shows in both north and south bound traffic a slight reduction. It will be seen that in the twenty months for which statistics are furnished the whole number of passengers carried was 233,456. Of this number 113,516½ were carried north, the earnings amounting to \$116,614.07, and 119,939½ were carried south, with earnings aggregating \$118,226.79. While the passenger business north and south has been so nearly the same, the north-bound freights, in quantity, were about double the south-bound, the former having been 67 per cent. and the latter 33 per cent. of the whole, with earnings in the north-bound freights aggregating \$314,932.56 compared with \$149,495.33. It is worthy of remark, however, in this connection that the increase in the quantity of freight during the six months ending March 1, 1879, over

the corresponding period of the preceding year was in north-bound business 49 per cent., while in the south-bound the increase reached 88 per cent.

The figures for comparative purposes have not the value which will attach to them after the road shall have been finished and a longer trial been made in the local field, and yet there is much significance to this exhibit of both the strength and growth of the early business of the road, enough to indicate that so far from the local advantages having been overestimated by the ardent supporters of this great undertaking there is promise of ultimate results on which the whole people may be congratulated.

CINCINNATI SOUTHERN RAILWAY.

Statement of passengers and freight carried, &c., from July 23, 1877, to March 1, 1879.

Months.	Number of passengers.		Tons of freight.		Passenger earnings.		Freight earnings.	
	North.	South.	North.	South.	North.	South.	North.	South.
1877.								
July	631	1,093	614	254	\$1,130 63	\$1,409 15	\$727 40	\$395 17
August	5,939½	7,836	2,033	1,721	6,078 35	7,244 09	4,369 03	4,106 00
September	7,448	7,741	4,015	2,917	8,210 50	8,221 61	11,423 18	7,219 94
October	5,940	6,206	6,717	2,469	6,763 13	7,663 97	18,677 96	6,576 18
November	4,793	4,903	4,948	2,799	5,473 50	5,250 25	19,796 74	6,840 45
December	5,343	5,882½	6,697	3,208	5,538 19	5,635 50	17,127 69	6,512 20
1878.								
January	4,946½	5,089	5,900	2,293	4,878 70	4,875 62	12,508 84	5,757 35
February	4,601½	5,079	4,706	2,050	4,807 79	4,419 76	9,227 86	5,563 70
March	5,410½	5,497	3,693	3,615	5,586 42	5,416 61	10,546 20	7,219 57
April	4,898½	5,050½	4,133	2,746	5,908 74	4,979 45	9,061 04	6,726 53
May	7,102	7,598	6,196	3,152	6,567 51	6,664 49	13,878 97	7,150 42
June	6,690½	6,930	8,376	3,761	6,224 99	6,479 20	14,094 72	11,613 93
July	8,091½	8,229	13,413	2,796	7,196 11	7,303 45	35,542 71	5,647 06
August	9,822½	9,779	10,550	4,235	8,422 44	8,190 03	25,607 80	8,216 73
September	6,700½	6,675	8,718	4,849	7,749 69	7,944 44	20,974 68	9,514 44
October	5,805	5,989	13,664	5,653	7,457 81	6,939 17	33,289 10	12,234 55
November	4,775	5,313	14,237	5,059	5,504 65	6,472 39	31,518 15	9,267 72
December	5,639	5,847	5,978	5,044	5,332 20	5,460 64	11,408 20	9,943 33
1879.								
January	5,102	5,122	4,479	4,954	4,229 00	4,141 46	8,814 25	10,194 00
February	3,620	4,060½	4,396	4,740	4,219 32	4,183 21	9,007 41	10,662 10
Total	113,516½	119,939½	137,469	67,714	116,614 07	118,226 79	318,932 56	149,495 33

Aggregate earnings, July 23, 1877, to March 1, 1879..... \$735,854 7.
Operating expenses, July 23, 1877, to March 1, 1879..... 267,554 9.

Net earnings, July 23, 1877, to March 1, 1879..... 468,297 60

Amount paid trustees Cincinnati Southern Railway to January 1, 1879..... 361,506 63
Amount paid trustees Cincinnati Southern Railway to April 1, 1879..... 412,661 66

In a letter addressed to Mr. Maxwell, by the Chief of the Bureau of Statistics, on the 10th of June, 1879, the following view was expressed in regard to the policy of the building of railroads by cities:

"My general view as to this matter is, that it is not advisable that cities should engage in railroad construction or management, except to meet a great public necessity, so pressing that the road, when completed, would undoubtedly afford commercial advantages commensurate with its cost, even though the city should lose its entire investment in the enterprise. Do you concur in this view?"

To this inquiry, Mr. Maxwell, under date of June 20, replied as follows:

"As to the Cincinnati Southern Railway and the general principle you name in connection with it, your letter opens a wide question. The municipality that engages in railroad construction of great magnitude enters a dangerous field. There certainly could be nothing to warrant it, except the most urgent public necessity to which private enterprise appeared unequal. It was largely this view of the case which moved the people of Cincinnati to engage in building, at public expense, the Southern Railway; and yet I think if the ultimate expense of constructing the road, the complications, dangers, and delays, could have been foreseen, there are many who supported the proposition who would have been of different mind. In other words, I think if the experiences of the city, since the construction began, could have been anticipated, there are grave doubts whether a majority of our people would have been willing to

have engaged in such an enterprise. Cost, time, and hazard have all been greater than our citizens contemplated. I do not mean to say I think the building of the road was a mistake, for I am just as confident that the road will prove of the highest benefit to the city eventually as I was at the commencement of the enterprise, and that it will ultimately pay us a large return, though the investment should be lost, a contingency which cannot arise save by great carelessness on the part of our people in caring for their property. Still I concur with you, 'that it is not advisable, as a general rule, that cities should engage in railroad construction, * * * and that they should never do so except in order to meet a great public necessity, so important that when completed the road would afford commercial advantages commensurate with its cost, even though the city should lose its entire investment in the enterprise.' This refers to construction, both this and management having been coupled in your general proposition. The construction, hazardous as it may be to a municipality, does not necessarily create a permanent risk, while with management, it is entirely indefinite as to time and offers temptations which are constant. It is so likely to get into politics, to affect elections, to fall into selfish and unprincipled hands, to be mismanaged in order to provide the way for absorption by designing men, that the effort of running the road by the municipality would be fraught with great danger. It is difficult for one man to successfully manage a great railway property, but it is more difficult for the whole population of a great city to do it. I might remark, that, so far as the Cincinnati Southern Railway can shed light upon the discussion of the general question, it presents itself in the shape of a stupendous undertaking, that has, through many dangers, been brought to near completion without shipwreck, and in such way as to preserve to the persons who furnished the money for building the property created by their expenditures."

APPENDIX No. 14.

INFORMATION FURNISHED BY MR. C. H. POPE, OF LOUISVILLE, IN REGARD TO THE TRANSPORTATION, COMMERCIAL, AND MANUFACTURING INTERESTS OF THAT CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

The following is an extract from a letter addressed by the Chief of the Bureau of Statistics to Mr. C. H. Pope, of Louisville, Ky., making inquiries in regard to the commercial and transportation interests of that city:

"Please to prepare for this office a statement in regard to the commercial and transportation interests of Louisville, referring especially to the commerce of that city with the Southern States, viz, the States of Kentucky, Tennessee, Georgia, Alabama, Mississippi, Louisiana, Arkansas, and Texas.

"In preparing this statement I desire that you will observe the following distinction: 1st, commerce arising from the sale of commodities manufactured in Louisville. This branch of your subject will lead you to furnish information in regard both to the industrial and the commercial interests of that city; 2d, commerce arising from the purchase of commodities by the merchants of Louisville, and the sale of such commodities into the Southern States; in other words, that branch of the commerce of the city in which the merchants simply perform the office of distributors of commodities manufactured or produced elsewhere.

"I desire that you will state at about what points the southern trade of Louisville meets the trade of New Orleans, and how far it overlaps that trade with respect to the principal commodities.

"Please also to state as to whether the various branches of the trade of Louisville are or are not gaining upon corresponding branches of the trade of New Orleans, especially as to supplying to the Southern States sugar, molasses, coffee, and other leading commodities, embracing both those manufactured at Louisville and those in which Louisville merely acts as a distributive market.

"I desire also that in your statements as to the distributive commerce of Louisville you will indicate the points at which the principal commodities dealt in by the merchants of Louisville are purchased, with especial reference to sugar, molasses, and coffee.

"The objects I have in view are perhaps more definitely stated in the following inquiries:

"Question 1. What are the extreme limits in the Gulf States east of the Mississippi River to which merchandise is shipped from Louisville—that is to say, the points to which general merchandise, including groceries, dry goods, crockery, hardware, drugs, chemicals, &c., is shipped?

"Question 2. Please to state the extreme southern cities or towns east of the Mississippi River to which sugar and molasses are sent from Louisville, and also tea and coffee, and with respect to commodities generally the limits wherein Louisville meets the trade of New Orleans.

"Question 3. Please to state the points in the States of Arkansas and Louisiana to which the various classes of merchandise above mentioned are shipped from Louisville.

"Question 4. Please to describe specifically the area south of the Ohio River, and also south of the State of Missouri, within which the manufactures of Louisville are sold.

"I desire that you will present your report in such manner as in your opinion will best enable you to answer the foregoing inquiries."

REPLY OF MR. C. H. POPE TO THE FOREGOING LETTER.

A city is a center of commerce. The elements which control the amount of that commerce and affect the channels through which it moves determine the prosperity of the city and map out its destiny. If these elements could be numbered and measured, it would be possible, with the exactness of a mathematical demonstration, to predict the future of the city; but as they are constantly varying, any solution of such a problem can only be approximate.

It is the purpose of this article briefly to consider the more important of these elements in their relations to the city of Louisville, Ky., to combine them with some statistics of trade at the present existing in that city, and to deduce some of the results which are indicated by the tendencies of Louisville commerce.

To aid in following the details and determining the influence of the various movements which comprise the trade under consideration, I shall divide the total commerce into, first, its distributive element; and, second, its productive or manufacturing element.

The definition and nature of all commerce presupposes it to be more or less distributive, and therefore the distributive is the generic, and the productive the specific form of commerce.

As these elements are dependent upon distinct conditions for their origin, and are governed by different laws of growth, it will be necessary in arriving at the influence they exert to divide them and to trace the separate development and tendencies of each.

Distributive commerce.

By distributive commerce I design to include all trade which has for its object the movement or interchange of commodities *through* the city under consideration, but *between* points outside of its own boundaries; commerce which neither originates nor alters the nature of articles, but merely handles those which are already produced.

A city whose growth and prosperity are wholly due to and dependent upon this form of trade is evidently a distributing point, and nothing more.

As distributive commerce must exist everywhere, and is essentially the primary impetus in the growth of all cities, it is to be expected that purely distributive cities would be far more numerous, but of smaller average size and importance than cities whose vital prosperities are dependent upon a productive or manufacturing commerce.

This expectation is supported by facts and statistics, though it applies only to the internal commerce of a country. For the distributive commerce of a seaboard town or a port of entry is always receiving an impetus from outside sources, which impetus bears no direct relation to its geographical position in a limited sense, that is, to the scope of country which is directly adjacent or tributary to it.

The extent to which an internal city may become prominent and prosperous from this form of commerce alone is dependent—

1st. Upon its location. It must be situated between the area of demand and points of supply; and,

2d. Upon its avenues of transportation. It must afford such facilities for the marketing of natural products and for the handling of supplies, that the most economic or desirable movements of trade between these areas of demand and supply shall be made through its gateways.

Manufacturing or productive commerce.

Under this head I shall class such commerce as exists or arises between a city and its markets, as a result of manufacturing or altering commodities within its boundaries.

Productive commerce is dependent both upon location and facilities of transportation, but the influence of these elements varies so much with the nature of the commodity produced, the supply of raw material, competitive manufacturing centers, &c., that no abstract general rules for its movements or growth can be laid down which will be either inflexible or valuable. Its relations may only be satisfactorily studied in special cases and localities.

Commerce of consumption.

A third form of commerce, made up of the imports of such articles as are consumed in a city, either for the support of its inhabitants and live-stock, or in the operations of manufacturing, might be added to the above. No statistics of this movement will be presented, however, for two reasons:

First. It has been impossible to obtain such statistics of sufficient accuracy to be valuable; and,

Second. The movement of this commerce is an effect, not the cause, of a city's prosperity; and is directly proportional to the size of the city and the number and nature of its manufacturing interests.

Statistics of consumption would add to the interest of the present article, but are not absolutely indispensable to its purpose, and, therefore, while they cannot be furnished in detail, allusion will be made to them where they should properly appear.

The relative importance of each form of commerce, distributive and productive, to the prosperity of a city, is very different.

As is evident, the mere transportation of merchandise furnishes employment to a comparatively small number of inhabitants. Hence distributive commerce has but little tendency to an increase of population. The capital used in this commerce is divided and passes into three channels:

First. Money paid for the commodities handled. This portion goes directly to enrich the various sources of supply.

Second. Money paid as freight charges to the corporations operating or controlling the radiating lines of transportation. This is sent to the headquarters of the corporations mentioned, and adds very little to the prosperity of the distributing city.

Third. The remainder of the money handled goes to pay rents, salaries, and sundry expenses, and as profits, into the coffers of a few who conduct the business.

As a small number of individuals can handle a large amount of merchandise, distributive trade adds only a minimum to the wealth of a city.

The benefits arising from a productive or manufacturing commerce are manifold. Chief among them are the following:

First. It gives employment to a comparatively large number of individuals.

Second. Hence it is one of the great inducements which a city can offer for the direct increase of its population.

Third. It keeps constantly afloat a large amount of capital, and the medium, from the nature of the case, must largely circulate within the city itself.

Fourth. It stimulates directly the imports of all articles which enter into the composition of its products. Being a consumer of these articles, such stimulus is more constant and healthy than if mere distribution took place.

Fifth. The marketing of the manufactures of a city increases its importance as a center of commerce much more than the handling of commodities; for the arms of manufacturing commerce are longer and their hold upon the trade firmer than is the case where distribution only takes place.

It is not pertinent to the present discussion to give a history of the "Falls City," but in order more clearly to understand its present position a few leading landmarks in its past commerce will be alluded to.

The fact that a series of rapids existed in the Ohio River, obstructing navigation at this point, led to the foundation of the city of Louisville. This small settlement of the last century lost the wild character of its commerce as civilization crept into Kentucky with the plowshare. And steadily as the log cabin gave way to the homestead, and the scanty gardens of the settlers were supplanted by the broad acres of the husbandmen, the trading-post of Boone and Kenton grew into a great market for the products of the soil.

From the time when occasional boats began to dot the bosom of the "Beautiful River," until the broad stream became the mightiest avenue of commerce between the far East and great South, the distributive trade of Louisville steadily advanced. The large crops of tobacco and corn that were made in the days of slavery flowed naturally into the city and were exchanged for supplies, which in turn went back to the planter. And thus for nearly three-quarters of a century previous to the war the only change which came to this trade, purely distributive in its character, was the constant increase in its amount.

It was during this long epoch of prosperity that Louisville built up its well-deserved reputation as being the largest leaf-tobacco market in the world.

Up to this time, location and every commercial influence which had been brought to bear upon it had tended to increase its importance as a point of exchange, so that in fact it owed not only success but existence itself to a distributive commerce.

Accompanying these years of healthy growth came the feeling of security engendered by success. This showed itself in the character of its enterprises, and even in its inhabitants. And perhaps it was well for the lasting good of both that a great change shattered its commerce and brought financial ruin and desolation to many of its homes.

The war between the States cut down at once the distributive commerce of Louisville to a minimum, and forced it, in common with many companion cities, to seek other supports for prosperity.

Some manufactories were started then, and many more were projected, awaiting for full development the impetus given to trade both productive and distributive at the close of the war.

The reopening of southern commerce, in 1864 and 1865, brought with it some elements the existence of which Louisville had never previously realized.

First. The element of active and aggressive competition in areas which were heretofore regarded as peculiarly its own property. This competition forced an increased vigilance in selling, but as the demand for merchandise exceeded the supply, prosperity still continued. The crops of the South were no longer cultivated by the wholesale arm of slavery. The owners of those crops, no longer the few members of an aristocracy of wealth, had become "many men of many minds." As a result, both of

this fact and the competition, those crops flowed through many channels and sought various outlet markets.

Second. Another important element of influence which developed rapidly after the war was that exerted by constantly changing and increasing avenues of commerce. The effect of extended facilities for transportation in general is to increase the number and to tend to decrease the size of distributing centers. Cheap and rapid carriers bring natural productions not only nearer to their markets, but increase the number of these markets which are available, and thus enhance the value of the products. Since this development, therefore, Louisville finds a competition from all southern cities, some of which she formerly supplied almost wholly herself.

To manufacturing commerce, increased facilities of transportation bring the opposing element of competition to a less formidable extent, and the advantageous element of increased areas of market to a greater extent than to distributive commerce. Thus these increased facilities, which lessen the importance of geographical position (an important condition for success in distributive trade), and annihilate natural barriers to commerce, give much the healthier stimulus to the productive element in a city's prosperity.

Previous to the war the commerce of Louisville was chiefly made up of an east and west movement, as would be inferred from the nature of the exchanges. Since that time, the influences which have prevailed have altered that condition, until now the largest and most important movement of merchandise is a north and south one. (For an extended discussion upon, and an estimate of the relative size and values of these movements and their influence upon Louisville commerce, see remarks by the writer in appendix to last "Report on Internal Commerce," in answer to questions 32 and 33, pages 221 to 224.)

The tendencies which previous to 1860 indicated a speedy and far-reaching development of railroad communication in the West and South were entirely eradicated by the events of the following four years. But the augmented quantity and value of southern commerce which succeeded the war gave to the avenues of transportation a renewed impetus and an importance which connected them intimately with the commercial prosperity of nearly every city in the Union. Particularly was this the case with Louisville. Her lines of railroad supply from the East and of southern outlet to her markets were completed just previous to the war, as follows:

To the Atlantic seaboard, in 1858, via Seymour, Ind., Cincinnati and Columbus, Ohio, Pittsburgh and Philadelphia, Pa., to New York City.

To the South Atlantic seaboard, in 1859, via Nashville and Chattanooga, Tenn., and Atlanta, Ga., to Charleston, S. C.

To Gulf ports:

Mobile, in 1859, via Humboldt, Tenn.

New Orleans, in 1860, via Milan and Jackson, Tenn., and Jackson, Miss.

For the five years succeeding the war these southern trunk-lines carried the bulk of merchandise to the States included in the area of Louisville commerce. Louisville was placed with regard to competitive cities in a most favorable attitude.

Cincinnati was obliged to send all freights through or directly in front of Louisville to tap the commerce of Southern Kentucky, Tennessee, Mississippi, Arkansas, Texas, Louisiana, and Saint Louis, with outlets to the South only by her Southeastern Railroad, met Louisville along the "Mississippi Central" (now New Orleans, Saint Louis and Chicago Railroad) and Mobile and Ohio Railroads on an equal footing, and was placed at an actual disadvantage when the southwestern territory of Arkansas and Texas or the southeastern area of Georgia or Alabama was to be reached.

These five years did not pass without carrying a lesson to these two most active of Louisville's competitors, and in 1869 Saint Louis had a Texas feeder in the Missouri, Kansas and Texas Railway, to be followed shortly after by her direct Southern outlet, the Saint Louis, Iron Mountain and Southern Railroad. This road, composed at first of the Saint Louis and Iron Mountain and the Cairo and Fulton Railroads, tapped directly the trade of Texas and Arkansas, and made Saint Louis the natural supply depot of this territory.

On the east of Louisville, still later, Cincinnati, fed only by the Kentucky Central (extending from Covington to Lexington), matured and pushed forward her Southern Railroad, which is now in course of completion. The effect of these changes in brief was as follows: Previous to '69 Louisville was by location and railroad outlets the keystone city of the South. Since that time, and by the influences indicated, her honors have been greatly divided.

The specific policies adopted by the southern outlets above noted, as exhibited by their freight tariffs and the influences exerted by these rates upon Louisville's transportation of merchandise, will be alluded to later in this article.

It is probable that in 1869, or shortly thereafter, her purely distributive commerce attained a maximum; and this inference, drawn from the above-mentioned conditions, is supported by a personal observation upon the nature of her southern trade through a series of years since that time, and by the actual figures representing her southern

exports. These exports attained a maximum in 1871 and 1872, when their amount via the Louisville, Nashville and Great Southern Road was 228,000,000 pounds for the year ending June 30, 1872. At that date it was four times as large as in 1866 and 1867, five years previous.

The decrease of southern exports since then and the fluctuations in the amounts of these exports may be due to the adjusting of the distributing trade of Louisville to the area which legitimately and permanently will support it; and also to the steady increase of her manufacturing commerce with its accompanying element of important influence.

One fact would seem further to support this theory, viz, that Louisville's maximum of southern exports was attained two years before the panic of 1873, whilst the maximum of general trade and prosperity throughout the area of Louisville commerce took place only a year previous to the panic.

Had these two maxima been coincident in point of time, it might reasonably be advanced that the falling off of exports was entirely due to the financial crisis and causes which produced it. The fact that the decrease commenced before the panic influences were felt leads us to look for another cause which should act directly and in the same way upon Louisville commerce that the general trade crisis in 1873 acted upon the commerce of the entire United States.

It is believed that this cause is discovered in the facts and tendencies above noted.

It will be observed that in noting the influences exerted by railroads, no allusion has been made to the part played by rivers in shaping and directing commerce. This influence is now entirely a secondary one. Less than fifty years ago commercial movements of all kinds were chiefly regulated by the facilities offered by water transportation. To-day the greater part of all general merchandises is shipped everywhere by rail. That was an epoch of rivers and canals, the present is an era of railways.

The only commodities now chiefly shipped by river are those comprising bulky and heavy freight, and then only when time in transit is not an important element. As but few interior points, comparatively, may be reached by water, and these only at certain seasons of the year, the modifying influence of river transportation is exceedingly limited if not altogether imperceptible.

Nor is allusion made in these pages to any of the financial panics which have periodically swept over the country. This is as was intended; for such influences are national, not local. Their effect has been felt equally from Maine to California, and from Minnesota to Texas. Because their influences have been in no way peculiar as regards Louisville, and for the reason that a consideration of the causes which produced them would be foreign to the purposes of this article, allusion to, or discussion of their influences has been omitted entirely.

Having thus in outline presented some of the leading features of Louisville's commerce in the past, a more comprehensive view may be taken of—

1. The present condition of commerce at Louisville, and a more intelligent opinion expressed upon—

2. The future tendencies of that commerce.

Present condition.

To arrive at this condition more clearly and to enable the results to be classified and considered in such a way as to show the tendencies of trade, I have compiled and append herewith two schedules embodying the results of a special investigation of Louisville's representative interests, both manufacturing and distributive. The facts in these tables have been obtained from personal interviews with upwards of one hundred of our leading merchants and manufacturers, and with parties whose knowledge of southern commerce, derived from contact with and participation in that trade, makes their opinions valuable and authentic.

In these statistics it is aimed to arrange the various branches of commerce and industry in the order of respective importance. This result has not been accurately enough obtained to make the arrangement a perfect one, though, as this article aims to show, general conditions and tendencies rather than exact value and statistical development, an inaccuracy of this nature will not materially interfere with its purposes.

About three months since a board of trade was established at Louisville, and although this organization now promises to be permanent, yet its machinery at present is hardly extended enough to give the details needed here. Hence the help derived from that source has been limited.

The gross amount of Louisville imports and exports is shown on its records, but the movements of the commodities comprised in these totals can only be traced by actual data got from shippers or by visiting the whole country reached by Louisville's commerce.

There are in Louisville nearly 7,000 business houses of all kinds and sizes and about 700 manufacturing establishments, including those of very minor importance. The value of Louisville's annual commerce, both distributive and productive, cannot be deter-

mined accurately from data at present available. The amount of actual sales will probably be upwards of one hundred and sixty and less than two hundred millions of dollars.

Although it is seen that in numbers the distributing houses in Louisville largely exceed the manufacturing establishments, yet it is probable that so far as values are concerned this relation is only apparent; and it is, further, likely that a comparison in number, even, between the leading manufacturers and the wholesale merchants would show them almost to balance. This is as it should be, for the merchandise consumed in Louisville is purchased almost entirely from small distributing merchants. Hardly a perceptible percentage is bought by consumers from manufacturers or wholesale houses direct, and hence the great excess in quantity of merchants over manufacturers is due entirely to houses of this retail distributive grade.

SCHEDULE I.—Showing the leading and characteristic elements in Louisville's distributive commerce.

Class.	Proportion of trade south of Ohio River.	Location and tendencies.	Where New Orleans trade is met.	Competitive cities.	Supplies purchased.		Remarks.
					North.	South.	
Leaf tobacco...	ly none.	All over the North and East and Northwest States and Europe.	No New Orleans competition.	Cincinnati, Henderson, Owensboro, Paducah, Hopkinsville, Clarksville, and Nashville.	.....	Nearly all from Kentucky.	See special remarks on leaf tobacco.
Groceries and provisions.	Fully seven-eighths.	Three-fourths of southern trade in general groceries is in Kentucky and Tennessee; some in Southern Indiana and Illinois and Northern Alabama, Mississippi, and Georgia; tendencies to shorter credits; large amounts of merchandise in this line sold for cash; terms which allow one per cent. discount for 10 days; time, repeat of bankrupt law has made trade safer and more satisfactory.	Principally in Northern Alabama and Mississippi on sugars and coffee.	For Kentucky: Cincinnati, Central Tennessee, Cincinnati, Saint Louis, and Nashville, Mississippi and Northern Alabama and Georgia; Above cities and Memphis.	Fine island sugar: Boston and Philadelphia. Coffee: Baltimore and New York. General stores: New York and Philadelphia.	From 15 to 20 per cent. of sugar supply comes from New Orleans. Most of this is raw sugar, though the popularity of high-grade New Orleans sugars is increasing and trade on them constantly growing larger. Rice: Charleston. Coffee: Mobile, New Orleans, Charleston, and Savannah.	See special remarks on grocery trade and its leading elements hereafter.
Dry goods and clothing.	Nine-tenths.	Kentucky, Tennessee, Mississippi, Alabama, Georgia, and some in Texas, Arkansas, and borders of Indiana and Illinois; best trade in Kentucky; next, Tennessee, Alabama, and Mississippi, according to nature of crops; tendencies to firmer and better prices.	Meet New Orleans in Middle Mississippi and Alabama; overlap with Mississippi south of Jackson and Meridian; fight New Orleans in Arkansas and Texas.	New York, Cincinnati, Saint Louis, Memphis, Nashville, Evansville, New Orleans, Galveston, and Chicago.	Jeans: In Kentucky and Indiana. Clothing: New York, Cincinnati, Chicago, Louisville.	Sheetings, plaid, and heavy cottons, drills, Olanburg, Georgia. Some in North Carolina and Tennessee.	
Whisky, distilled, and malt liquors.							This trade is so intimately connected with Louisville's productive or manufacturing interests that it will be treated under that head.

Hardware, including iron and steel, &c.	Nine-tenths.	Kentucky, Tennessee, Alabama, Mississippi, Georgia, Louisiana, Indiana, and Illinois; best trade in Kentucky and Tennessee; credit shorter; prices firmer; advanced already in some articles.	At Vicksburg and Jackson, Miss.; fight her south of those points; have trade within 70 miles of New Orleans.	Cincinnati, Saint Louis, Pittsburgh, Nashville, Memphis, New York.	Light hardware in Connecticut and New York and New Jersey; heavy goods of western manufacturers; about one-half supplies purchased east and one-half west, including Pittsburgh; iron and steel chiefly Pittsburgh.	Nothing.....	Formerly large amounts of imported goods were used. This element is growing less and less each year.
Drugs	About seven-eighths.	Kentucky, Tennessee, Northern Alabama, and Northern Mississippi; some in Northern Georgia, Southern Indiana, and Illinois, Arkansas, Missouri, Louisiana, and Texas; largest trade in Kentucky; see; prices tending upward; longer credits asked but not given.	Meet New Orleans in Central and overlap in Southern Mississippi.	Saint Louis, Cincinnati, Evansville, Chicago, New York, Memphis, and Nashville.	New York, Philadelphia, and manufacturing points. Glassware: Pittsburgh, New Albany, Philadelphia. Quinine and morphia: Philadelphia.	Rosin, turpentine: South Carolina. Some proprietary medicines from the South, New Orleans, and Memphis.	Import many articles direct, but can buy almost as cheap in New York and Philadelphia.
Seeds and agricultural implements.	Nine-tenths.	Kentucky, Tennessee, Northern Alabama, Georgia, and Mississippi, Arkansas.	Don't meet it	Cincinnati, Saint Louis, and western manufacturers in cities.	Seeds from Kentucky and North, East, West, and South. Agricultural implements mostly from western manufacturers.	.....	Import some seeds.
Wood and mill low ware.	Three-fourths.	Kentucky, Tennessee, Northern Georgia, Northern Alabama, and Northern Mississippi.	Don't meet it	Cincinnati, Saint Louis, and western manufacturing points.	New York and western manufacturers.	.....	.....
Hats and caps.	Over two-thirds.	Kentucky, Tennessee, Mississippi, Alabama, Arkansas, Indiana, and Illinois; some woollen goods already advanced.	Meet New Orleans and fight it south of Jackson and in Meridian and in Arkansas on Onatchita and Arkansas Rivers.	All northern cities. In Tennessee: Memphis.	Factories in Northern and Eastern States.	.....	Annual trade of Louisville in hats about \$800,000.

SCHEDULE I.—Showing the leading and characteristic elements in Louisville's distributive commerce—Continued.

Class.	Proportion of trade south of Ohio River.	Location and tendencies.	Where New Orleans trade is met.	Competitive cities.	Supplies purchased.		Remarks.
					North.	South.	
Boots and shoes	Almost four-fifths.	Kentucky, Mississippi, Arkansas, Tennessee, Alabama, in order named; some in Indiana; credits shorter; prices firmer, and some advances already sustained.	In Arkansas and Mississippi, and overlap it.	All northern cities.	Factories in New England for cheap goods.	.....	Louisville makes better quality of goods, and they stand high with the trade. There is also a preference on part of Louisville jobbers to sell home work. If prices and terms could be arranged, but factories mostly job their own products.
Queensware	About seven-eighths.	Kentucky, Tennessee, Northern Alabama, Northern Mississippi and Indiana; short credits, close margins.	Don't hear much of New Orleans.	Cincinnati, Saint Louis, New York.	Glassware: Pittsburgh, Wheeling, Lamp goods: New York.	.....	Most merchandise in this line imported direct.
Bagging	All	Cotton States. Louisville sells 100,000 pieces of 50 yards each, per annum. One piece covers eight bales, hence Louisville handles bagging for almost one-sixth entire cotton crop of United States.	.....	.....	Ohio, Indiana, and Louisville.	.....	See remarks on cotton.
Machinery	Three-fourths	Kentucky and Tennessee principally; some in Alabama and Northern Mississippi.	Do not meet it.	Cincinnati and Saint Louis.	Western manufacturers, Cincinnati, Dayton, &c.	.....	See special remarks on cotton.
Cotton	.....	.....	.....	.....	.....	.....	.....
Horses and mules.	.....	Largely exported all over the country where quality is an object.	.....	.....	.....	.....	Kentucky stock has a national reputation, and Louisville is headquarters for a great deal of it.

Aside from the above lines of merchandise, which essentially represent the strictly distributive commerce of Louisville, there are others which are largely handled here, but the bulk of which are consumed at or near the city. They enter into and compose in part the element alluded to in the early portion of this article as the commerce of consumption. The magnitude of trade in some of them is sufficient to warrant an especial mention, at least of the following:

Coal.—Previous to 1872, Louisville was entirely dependent for her coal supply upon the Pennsylvania mines about Pittsburg, but since the development of Kentucky's coal-fields the aspect of the market is entirely changed. The total consumption of coal at Louisville varies from about thirteen to fifteen million bushels (76 pounds is reckoned a bushel) per annum. For the year 1878 it was 14,330,000 bushels. When this commodity came wholly from the Pittsburg market the supply at Louisville was entirely dependent upon the condition of water in the Ohio River, so that coal famines were liable to occur when a protracted low stage of water existed. As a fact, these coal famines were of almost annual occurrence. Since the discovery of Kentucky coal its use has increased very rapidly, until now about one-eighth to one-seventh of the entire supply for this market comes from the home mines.

During the year ending July 1, 1879, there were received and consumed at Louisville 1,739,275 bushels of Kentucky coal. This development of a home supply has cut off entirely the shipments by rail of Pittsburg coal from Louisville, except a very limited amount for blacksmith purposes, &c. And it is even claimed that some grades of Kentucky coal will work in the forge. The rapid development of this source of supply is shown by the following table, which comprises the total annual shipments of coal from mines on the Elizabethtown and Paducah Railroad since the opening of that road in 1872:

	Bushels.		Bushels.
In 1872.....	654,000	In 1876.....	4,709,000
In 1873.....	2,091,900	In 1877.....	5,400,000
In 1874.....	2,738,000	In 1878.....	7,000,000
In 1875.....	3,605,000		

From the above figures it will be seen that Louisville consumes about one-fourth of entire product of Kentucky mines. And it may be added that the supply of Kentucky coal is sufficient to prevent in future the disastrous effects of past coal famines under ordinary circumstances. When Kentucky and Pittsburg coal are both in the market in sufficient quantities to meet all demands the price of the former will average two cents per bushel less than the latter.

I submit herewith a comparative analysis of coals, claimed to be taken from the report of Prof. N. S. Shaler, State geologist of Kentucky, and from "McFarland's Coal Fields of America."

	Fixed carbon.	Volatile matter.	Ashes.	Total.
Pittsburg coal.....	54.93	36.76	7.07	98.76
Do.....	61.45	31.45	5.80	98.70
Kentucky coal.....	50.22	46.06	2.72	99.00

It is probable that Kentucky coal varies in composition as much or more than Pittsburg, and that the above is an analysis of a good grade of the former. If these proportions apply in general between the two fuels, Kentucky differs from Pittsburg coal chiefly in having less carbon and ashes and more volatile matter.

No note is here made of the sulphur (which is an important item and very injurious as regards the use of coal in the working of iron) which exists in some grades of Kentucky coal, but in what proportion I am unable to state.

Of Pittsburg coal, there were received at Louisville in 1878 29,900,000 bushels, and shipped below in 1878 21,500,000 bushels; consumed at Louisville, 11,300,000 bushels. The stock on hand January 1, 1879, was about 2,900,000 bushels more than on January 1, 1879.

The movement of Pittsburg coal below Louisville is hardly a proper element in her distributive or other commerce, although all of it stops at this point. This stoppage is occasioned by the passing of the fleets through the canal or over the falls, and affords convenient opportunity for measuring the cargoes. The coal passing below is, moreover, entirely owned by first hands at Pittsburg, and the only benefits which Louisville derives from its passage are the comparatively unimportant ones of gauge fees, towage, and perhaps once in a while wharfage. This last very seldom, as the barges, if delayed, either put up above the city at the Pumpkin Patch or below at West Louisville.

Of the total amount of coal shipped out of the Monongahela River at Pittsburg a

fraction over one-half reaches Louisville. Of this half only about one-third remains here for consumption. The remaining two-thirds passes below to supply Lower Ohio and Mississippi River ports.

It is well, in summing the value of this trade to the city, to remember that a large percentage of the coal movement, both Pittsburg and Kentucky, is a result of the demand for its use in the manufacturing industries of Louisville, and that none of it belongs to the proper distributive commerce of this point.

Hay, grain, and fruit.—The trade in these articles is largely for consumption. A limited amount of hay and fruit is distributed by Louisville, mostly to markets near home. A large part of the grain handled here is used by the flour-mills and malt-liquor manufacturers. An accurate estimate of the movement of these articles has not been obtainable, owing to the miscellaneous avenues used in their transportation and the lack of any comprehensive statistics relating to merchandise moving over them.

Live stock, except horses and mules.—Under this head hogs are the most important, and are supplied largely from Kentucky and Indiana for our pork-packing establishments. As these industries head the list of Louisville's productive commerce, the movement of hogs is a large and very important one, and places Louisville in the position of heaviest consumer of hogs in the United States on or south of the latitude of 38½ degrees.

Cattle are mostly handled for home consumption. Louisville is not headquarters for this class of stock, as the great cattle-producing regions are west and southwest, and tributary to Saint Louis, Chicago, and other Western markets.

Sheep do not form an important element in Louisville's live-stock commerce.

REMARKS ON SPECIALTIES NOTED IN SCHEDULE I.

Leaf tobacco.—As before stated, Louisville is the largest and most important leaf-tobacco market in the world. Most of this product, probably four-fifths, which she handles is raised in Kentucky, and consists principally of "heavy" tobaccos suitable for manufacture and export. Of the remaining fifth, the larger part is raised in Tennessee and Indiana.

(For the movement in detail of the tobacco crop of the interior with relation to Louisville reference may be made to a paper compiled by the writer, and published in Appendix to last Report on Internal Commerce, pages 202 and 203, in answer to question 4.)

In the year 1877 there were sold in this market 56,218 hogsheads of tobacco; in 1878, 71,080 hogsheads; during the first six months of 1879, 28,645 hogsheads; and in July, 1879, 7,521 hogsheads. The stock on hand on the 31st of July, 1879, was 16,330 hogsheads. Average weight of hogsheads sold in this market twelve to fourteen hundred pounds.

The tobacco handled by Louisville goes to every town in the United States where the leaf is manufactured, and large quantities are exported direct to Germany, England, France, and other foreign markets.

Leaf-tobacco forms by far the largest and most important element in the distributive commerce of Louisville. In fact, the value of this commodity handled represents an annual movement of capital of from eight to ten million dollars, and is, hence, not only larger by far than any single element in her manufacturing commerce, but equal, roughly, to one-sixth of the total annual manufactured product of the whole city.

The movement of this staple gives employment, aside from proprietors and office help, to only about 500 inhabitants (and these representing mostly cheap labor of little benefit to the city as citizens), for perhaps six months in the year, while two or three of our large factories, turning out an annual product of one-fifth the above amount, furnish work to the same number of skilled employes and desirable citizens the year round. These facts will be of significance in comparing the benefits accruing to Louisville from the two forms of commerce.

It is important in considering the condition of distributive trade at Louisville to note that the tobacco-producing areas which ship their product to Louisville are so situated that nothing short of a radical change in the avenues of transportation or a total disregard of the interests of the shippers by the merchants in Louisville who handle the "weed" will interfere with the supremacy of the city in this direction. These areas are properly tributary to Louisville, and with reasonable care in fostering her trade this element in her distributive commerce promises not only to be permanent, but to retain its magnitude, and so cause Louisville to keep her position, heading the list of the world's leaf-tobacco markets.

Groceries.—The commerce of Louisville in groceries, including as it does some specialties of import and of home manufacture, deserves some special remark.

The distributive grocery trade proper is confined almost entirely to Kentucky, Tennessee, Southern Indiana, and Illinois. It therefore does not meet New Orleans trade at all nor feel New Orleans competition.

In some specialties, in the line of fancy groceries, bulk meats, &c., Louisville sends

goods into North Alabama and Mississippi, and in this territory New Orleans competition is felt principally in the lines of *her* specialties—sugar, molasses, and coffee. The general grocery trade of New Orleans does not extend as far north as this belt of country east of the Mississippi River, though New Orleans trade in *her* specialties above mentioned comes even to Louisville, and probably still farther north, to the larger cities.

West of the Mississippi River, however, the grocery trade of New Orleans extends into Northern Arkansas. In fact, Arkansas purchases largely of New Orleans in several lines, especially along the Ouachita, White, Arkansas, and Red Rivers. This fact is a natural consequence of the geography of the country and the nature of its products.

New Orleans, from her position of chief cotton market of the United States, gets a large amount of Arkansas cotton. Along the line of railroads in that State, however, freights are so high to New Orleans that this staple finds its way to Saint Louis and Memphis. But river cotton can be sent to New Orleans from all parts of Arkansas cheaply and satisfactorily, and as river bottoms produce a large bulk of the cotton, its largest movement in that State (probably almost one-half the entire crop) is towards the Crescent City.

Now, in sending out solicitors for cotton shipments, many houses being both cotton factors and wholesale grocers, add to the duties of such solicitors the business of selling groceries. And it is true, in fact, that throughout the entire South cotton and groceries move through the same channels, but in opposite directions, so that very largely cotton goes where groceries come from. Hence, as Arkansas cotton goes to New Orleans, Memphis, and Saint Louis, these cities control the general grocery trade of that State. During the months when the rivers of Arkansas are navigable, a considerable amount of general distributive commerce follows in the wake of these leading exchanges, and hence, as will be seen by a reference to the schedules of Louisville commerce, New Orleans competition is occasionally met with in Arkansas, but only along the lines of river transportation.

East of the Mississippi River New Orleans can hardly be called a competitor of Louisville, for the direct northern commerce of the former city can only move by railroad, and New Orleans has but a single northern outlet of that description. And it is true, generally, that the trade of northern cities south can extend a greater distance from those cities than the trade of southern cities in a northern direction. The reason of this fact will readily be seen when it is remembered that distributive commerce which moves north moves towards the area of headquarters for merchandise and that of greater competition, both from cities and avenues of transportation, whilst a like commerce moving south travels away from both headquarters and from competition. It is easier to sail with the stream than against it.

The distributive trade of Louisville in sugar, molasses, and coffee is confined to a smaller area than even *her* general grocery trade; *i. e.*, the houses making New Orleans sugars, molasses, sirups, and coffee exclusive specialties distribute their goods mostly in Kentucky and Northern Tennessee. Some houses, however, which carry large stocks of general groceries take these New Orleans specialties into North Alabama and Mississippi, where they meet New Orleans in these very lines.

As a rule, Louisville grocers are not doing anything to get trade from the far South; they take what comes. And it can hardly be substantiated that the trade of Louisville is gaining on that of New Orleans in *her* own specialties, when these specialties are so intimately connected with a general trade (groceries), which hardly meets the corresponding trade of that city.

Reference to Schedule I will show the reason why Louisville grocers do not push trade to great distances to lie in the fact that the competition of Memphis, Nashville, Saint Louis, and Cincinnati divides the trade to such an extent that their share of it does not prove profitable.

The supplies of Louisville in the lines above mentioned, of sugars, molasses, sirups, and coffee are obtained from various headquarters.

From 20 to 25 per cent. of sugars and molasses sold in Louisville come from New Orleans.

Island and refined sugars mostly come from Boston and the East, New York, Baltimore, and Philadelphia. The percentage of high-grade goods, especially clarified, and lately some refined, from New Orleans, however, is increasing every year, and these are proving popular with the trade. The entire importation of these articles from New Orleans takes place during the winter months. After March the supply of that city is exhausted, and merchants are obliged to purchase their season's stock during that time or go to other sources.

There is quite a trade at Louisville in corn sirups made at Buffalo and other Northern points.

Louisville uses about 6,000 hogheads of medium and common grades of New Orleans sugars, about 100,000 barrels refined sugars from the seaboard, and about 7,000 to 8,000 barrels New Orleans molasses.

The supply of coffee used by Louisville comes from almost every port of entry in

the United States—New Orleans, Mobile, Savannah, Charleston, Baltimore, Philadelphia, and New York.

The chief headquarters for coffee are New York and Baltimore, next New Orleans and Mobile.

Louisville handles about 75,000 bags of coffee per annum. Nine-tenths of this is "Rio" and "Santas," the balance Mexican, Java, &c.

Mexican coffees are preferred to South American, and Central American are highly esteemed. These two classes, Mexican and Central American, come from New Orleans.

Coffee is bought by Louisville merchants almost wholly through resident brokers, who represent direct importers or larger jobbers at ports of entry who buy by the cargo.

Tea is comparatively an unimportant item in the Louisville grocery trade. There are no houses which make a specialty of wholesaling this commodity. The grocers only handle it in connection with other goods. They buy principally in New York and Philadelphia.

The trade of Louisville in bulk meats, bacon, hams, and lard, is partly manufacturing and partly distributive. Louisville is the extreme southern limit of manufacturing in this line, and her provision dealers exhaust the home supply before the season is over. These products are sold all over the country, and their trade partakes essentially of the features of Louisville's pork-packing, manufacturing commerce. (See Schedule II.)

Not more than one-fourth of the supply of these articles sold by Louisville provision dealers alone is of home manufacture. This percentage being sold, dealers are forced to buy in Cincinnati, Chicago, and Saint Louis.

The facts that these specialties go all over the country, that they meet with no Southern competition, and that the home supply is exhausted before the trade demands are met, speak eloquently in favor of extending these branches of Louisville's manufacture.

Cotton.—The commerce in cotton is a comparatively small one at Louisville, but with a view to the influences which are at present operating upon this and some other Southern markets, a few ideas present themselves which seem worth presenting in this connection.

The gross receipts of cotton at Louisville vary from three hundred and sixty to four hundred thousand bales per annum. Of this total only about 25,000 bales stop in Louisville for handling and reshipment. The balance represents such proportion of the overland movement as passes through Louisville from other cotton markets. (By reference to Schedule I it will be seen that one-half the bagging sent south from Louisville in bulk again passes through the city in the opposite direction in the form of covering for the cotton which seeks this outlet.)

As has been noted with reference to other cities, the movement of cotton controls the sale of certain staple classes of merchandise, or, to be more accurate, it is natural for trade in these staples to follow the avenues of commerce opened up by, and used in, the movement of cotton.

Were the cotton which passes through this point handled at Louisville, the result would make the Falls City one of the chief interior cotton markets of the United States. The very appearance of this amount of the staple at Louisville shows that our city lies in the natural pathway from some point or points of supply to some other point of demand. Why not take advantage of this fact?

Saint Louis, during the last ten years, has built herself up as a very prominent cotton market. To-day a very fair proportion of Arkansas and Texas cotton finds its way to her commission merchants. In Arkansas she meets and fights with New Orleans and Memphis for the product of that State. In Texas her competitors are New Orleans and Galveston, and be it said to her credit, she takes to herself a very respectable share of the spoils. This result has been achieved when formerly not a fraction even of the overland cotton movement passed through her streets. She has forced herself into the position which she so successfully occupies. And now the overland movement does have an arm lying across her threshold, and her trade in sundry commodities and her general prosperity are greatly augmented by this effect of her energy.

Not only does Louisville lie in the direct pathway of a certain and very considerable amount of cotton, but there are just at present tendencies at work which seem to invite her to lay hold of circumstances and make herself mistress of the position.

First. Her railroad connections with the cotton-producing areas of Tennessee, Mississippi, Alabama, and Georgia are direct. She stands in a better comparative position with relation to the Southern cotton-producing area than did Saint Louis when she entered the arena.

Second. Events of the past two years would indicate that Memphis, the next cotton market in importance to New Orleans, so far at least as the territory under consideration is concerned, is to be devastated annually by the dreaded and terrible scourge of yellow fever.

New Orleans is liable any season to have her doors closed by the same cause; and whether in either case the epidemic proves general, or the disease confines itself to a

few sporadic cases, the result will be the same, viz, to alarm the nation and close the avenues of commerce so far as they lead to these two cities.

The fact that a location in Memphis is liable, from a business point of view, to be valueless for three months in the year, will in other ways (to be considered later) affect the future of Louisville commerce, but in relation to the cotton crop of the South it would seem to indicate—

First. That as this suspension of business is liable to take place at the opening of the cotton season when the quality of the staple is superior and the quantity abundant, another outlet or market will be almost necessary; and

Second. That with reasonable effort on the part of Louisville, a large part of the cotton in the area mentioned might be diverted to this city and so make of her in a few years as much of a cotton market at least as her competing sister, Saint Louis.

This is a possible result, but hard work, untiring energy, and a determination to succeed are necessary to make of it an accomplished fact.

Previous to enumerating general deductions with regard to distributive commerce, the statistics of the other form of trade will be presented.

SCHEDULE II.—Showing the leading and characteristic elements in Louisville's productive commerce.

Industry and general statistics.	Location and nature of trade.	Competitive cities.	Remarks.
<i>Pork packing.</i> —There are about 20 firms engaged in this business here. They have about 2½ million dollars invested, and turn out an annual product of from 7 to 9 million dollars. They kill 275,000 hogs per annum for winter packing, and make 20 to 30 thousand tierces prime lard.	The product is shipped all over the United States, from Maine to California, and from Canada to Texas divided somewhat as follows: dry salted meats and lower grades of lard sent all through the South; Georgia is one of the heaviest buyers; prime lard goes North and East almost wholly; sugar-cured hams all over the North and East; most of this trade is for cash.	Cincinnati and Chicago, though Louisville sells her entire product every year, and could do more if she had it.	The meat killed by packers forms only about one-fourth the amount distributed by Louisville.
<i>Manufactured tobacco.</i> —In Louisville, 20 manufacturers of tobacco, who in year ending June 30, 1879, turned out a product of 4,793,840 pounds. Nearly half of this was the product of a single firm.	Seven-eighths of trade north of Ohio River, but sell in Southern, and Southwestern, and Southeastern States. Prices have advanced, and are firm now.	Western factories and Virginia to some extent.	Supplies bought in Louisville.
<i>Fermented liquors and spirits...</i>	Kentucky whiskies have long stood at the head of the list. The trade in these goods extends all over the United States. The finest grades of goods go North, East, and West mostly, while the South and Southwest trade is composed chiefly of compounded goods. In rectified and compounded goods, from two-thirds to nine-tenths of trade is South and Southwest, in Kentucky, Tennessee, Mississippi, Alabama, Georgia, North and South Carolina, Arkansas, Louisiana, and Texas. In straight Kentucky whiskies 95 per cent. of trade is north of Ohio River, and west of Mississippi. In malt liquors the product is mostly for home consumption; some trade in the immediate vicinity; tendencies to firmer prices and shorter credits; large part of these goods sold for cash.	Louisville is headquarters in the line of best grade of distilled liquors, though in her wholesale trade in compounded goods of lower grades, Saint Louis and Cincinnati are competitors. Some Tennessee whiskies rank high.	Straight Kentucky whiskies are 10 per cent. higher than same grade last year; trade never more healthy than at present; lower grades same as last year; product of 1878 scarce, and price advanced.

SCHEDULE II.—*Showing the leading and characteristic elements in Louisville's productive commerce—Continued.*

Industry and general statistics.	Location and nature of trade.	Competitive cities.	Remarks.
Hydraulic cement. —Nine mills stand about Louisville; capacity four thousand barrels per day; capital invested about \$700,000.	Annual sales not more than one-fourth the capacity, say 320 thousand barrels; trade all over the Union, except the New England States; about three-fourths of trade in the Northwest.	Principally Chicago.	As the demand for cement is principally for public works and heavy operations, such as "bridge-piers, &c., the trade has seriously felt the depression of the past few years.
Tanneries. —There are 23 tanneries about the Falls; 17 of these are in Louisville. Product, sole and harness leather; 4 produce sole leather exclusively, and 10 produce only harness leather; consume 190 to 240 thousand hides per annum; supply for "heavy sole" comes from Texas and Colorado; harness from native stock Kentucky, Ohio, Indiana, Illinois, and Mississippi; use pure chestnut oak bark for tanning, from Kentucky, Tennessee, and Alabama; annual consumption of bark 25,000 cords, ranging from \$10 to \$12 per cord.	Formerly, in 1875, 1876, and 1877, a large amount of Louisville leather was exported. Since then, till recently, the quantity has decreased. Now a class of goods is made for and consumed in large lots by the German market. Trade for harness leather extends from Boston to Colorado. A large part of the sole leather goes East to the shoe factories.	-----	Our tanneries have lately taken premiums for best sole leather in the world.
Foundries. —Over 20 in Louisville; about \$2,000,000 invested. Supplies: pig-iron, three-fourths from Kentucky, Alabama, and Tennessee; one-fourth from Ohio; wrought iron from New Albany, Ind., and Pittsburgh and Ohio mills. (See Stoves, Mantels, Grates, and Caskets.)	Southern trade in Kentucky, Tennessee, Mississippi, Alabama, and Louisiana; Northern trade in Indiana and Illinois; Southern trade is reported lighter of late, probably because foundries are springing up at many points in the South.	Cincinnati, Saint Louis, Evansville, Memphis, and Nashville.	Accurate statistics of this industry would be very difficult to get, owing to the miscellaneous product turned out, and the variable elements in the business.
Furniture, including chairs. —There are 6 furniture and 4 chair factories at Louisville, employing 150 hands each, and turning out annual product of 1½ million dollars, divided thus: general furniture, \$900,000; parlor furniture, \$250,000; chairs, \$450,000; capital invested, \$500,000. Supply of walnut formerly came from Indiana, but is being used up, and it now comes largely from Tennessee. A constant supply of lumber is carried worth \$250,000.	About three-fourths of trade is South, in Kentucky, Tennessee, Alabama, Virginia, North and South Carolina, Georgia, Florida, Louisiana, Mississippi, Texas, Arkansas, and Missouri; one-fourth trade North, in Maryland, District of Columbia, Indiana, Iowa, Kansas, Colorado, and Illinois; best trade in Georgia; sell on 3 months' time, but many purchasers take advantage of the additional discount of 5 per cent. allowed, and pay cash.	Cincinnati and Chicago.	
Agricultural implements. —Seven factories; have about 1½ million dollars invested; annual product about 2 million.	Kentucky, Tennessee, Mississippi, Alabama, Georgia, South Carolina, Louisiana, Arkansas, Texas, Missouri, Indiana, and Illinois; nine-tenths of this trade is South.	Cincinnati, Saint Louis, New York, Illinois, and Indiana factories.	
Flour. —Five large mills in and around the Falls; ½ million dollars invested; annual product 1½ million dollars.	Of the flour made at Louisville, a little less than one-third goes North. About the same amount is consumed at Louisville; and balance, mostly low grades, goes South.	Every city of importance North and South.	
Doors, sash, blinds, &c. —Nine factories; annual product about 1½ million dollars.	Kentucky, Tennessee, Southern Indiana, and Ohio.	Cincinnati, Saint Louis, and Northwest factories.	

SCHEDULE II.—*Showing the leading and characteristic elements in Louisville's productive commerce—Continued.*

Industry and general statistics.	Location and nature of work.	Competitive cities.	Remarks.
<i>Manufactured clothing.</i> —Six establishments; annual product 1½ million dollars.	Kentucky, Tennessee, Mississippi, Alabama, Georgia, Arkansas, and Texas; some trade north of Ohio River.	New York, Cincinnati, Saint Louis, and Chicago.	
<i>Blank books and publishing.</i> —Six establishments of large size.	Principal trade in Kentucky and North Tennessee; some in Mississippi and Southern Indiana.	Cincinnati and Saint Louis.	
<i>Stone and marble works.</i> —About 20 establishments.	Principal trade in Kentucky, Louisville and vicinity.	Cincinnati.	
<i>Boots and shoes.</i> —Seven factories in business. Annual product about \$1,000,000. Supplies: Sole leather from Louisville; upper leather, Philadelphia and Delaware.	Kentucky, Tennessee, Mississippi, Indiana. Some in Arkansas, Texas, and Georgia. Trade largely for cash.	Chiefly Cincinnati and Philadelphia, but all Northern cities more or less.	The quality of Louisville goods in this line is superior. Eastern factories supply all cheaper work sold here and a large proportion of the better grades, our factories being quite limited in capacity.
<i>Lumber.</i> —There are 4 or 5 large mills here and an immense amount of lumber imported for home consumption.			Impossible to get accurate data of value of this trade without extended and expensive investigation. Most lumber made and imported here is consumed in building or manufacturing. Louisville has no extended lumber trade, though the amount made and used here entitles it to rank high in the list of industries.
<i>Gas and water pipes.</i> —One factory, capital \$460,000, employing 280 hands; annual product, \$850,000. In 1875 made 23,000 tons; in 1876, 14,000 tons; in 1877, 24,300 tons; in 1878, 18,000 tons by actual weight. Two-thirds of supply of iron comes from Alabama and Tennessee and balance from "Hanging Rock" region (Ohio).	Principally North and West. Largely in Ohio, thence to Salt Lake and Logan City. Tendency upward in price, as iron has advanced one to two dollars per ton.	Cincinnati and Saint Louis.	
<i>Stoves, manila, grates, and cast- ings.</i> —Four large foundries. Supplies: Pig-iron, one-third from Tennessee and Alabama, balance from Ohio; sheet-iron, Pittsburgh, Indiana, and Virginia; galvanized iron and sheet copper, Pittsburgh; tin-plate, New York and Philadelphia.	About three-fourths of this product is sold south of the Ohio River in Kentucky, Tennessee, Mississippi, Louisiana, Georgia, South Carolina, Arkansas, Texas, and Alabama. Louisiana is one of the safest States and Georgia has been one of the best paying. Tendencies upward in price and to shorter credits. No advance yet.	Cincinnati, Evansville, Saint Louis for States south of the Ohio River; New York, Philadelphia, and Eastern cities for coast trade and Texas.	

SCHEDULE II.—*Showing the leading and characteristic elements in Louisville's productive commerce—Continued.*

Industry and general statistics.	Location and nature of work.	Competitive cities.	Remarks.
Carriages and wagons. —Several factories in this line. Supplies from Western depots which formerly came from the East. Leather from Newark, N. J.	Nine-tenths of product goes South to Kentucky, Tennessee, Georgia, Mississippi, Alabama, and Texas. Prospect of advance in price and shorter credits.	Cincinnati and Western factories. No New Orleans competition. Sell our goods in that city.	
Saddles and harness. —About 20 firms in this branch. This industry has sprung up almost wholly in the last ten years. Supplies: Leather and saddletrees in Louisville. Hardware from Connecticut to Ohio; one-third from Pittsburgh and Columbus and the West, which is becoming headquarters for these goods.	Nineteen-twentieths of trade is in Southern States, Kentucky, Tennessee, Georgia, Alabama, Mississippi, Louisiana, Arkansas, Texas, and Missouri. Some trade in Indiana. Decline in goods has ceased. Tendencies to shorter credits. Trade on a better basis.	Formerly New York but now Cincinnati, Saint Louis, and Baltimore. New Orleans is not heard from.	Yellow fever affects trade till fall, cutting it off in infected regions.
Candles and soap. —Five factories. Annual product of about half million dollars.	Sell in Kentucky, Tennessee, North Mississippi, and Alabama; also some trade north of Ohio River.	Principally Cincinnati and Saint Louis.	
Woolen mills. —Four large mills at and around the falls.	Sell all over the South and have good reputation as to quality of goods. Trade bettering and increasing. Some trade North.		
Paper mills. —Two large establishments.	Trade principally north of Ohio River, but ship largely South to principal cities.	Northern and Eastern manufacturers.	
White lead. —Two factories. Annual product, 1,600 tons; capital invested, \$225,000; 60 hands employed. Supplies: Lead mostly from Omaha and Saint Louis; other stock at Louisville.	Three-fourths of trade south of Ohio River, Kentucky, Tennessee, Georgia, Alabama, Mississippi, South Carolina, and Louisiana. A considerable amount of dry lead, say one-eighth of entire product, goes Northwest. Most satisfactory trade in Kentucky, Tennessee, and Georgia. Goods sold on 60 days' time, but many parties avail themselves of the 1½ per cent. discount. This reduces over half trade to cash.	Saint Louis principally. No competition from the South.	
Bridge works. —One establishment; capital invested \$300,000. Amount of castings annually used, 250 tons; of wrought-iron work, 2,800 tons; castings all made in Louisville. Wrought iron mostly comes from Pittsburgh. Will make in 1879 about \$300,000 worth of work. Outlook is toward a largely increased business. As wrought iron has advanced ½ cent per pound all bids now are raised accordingly.	Formerly trade was entirely in South, now perhaps one-third of it is north of Ohio River. Do work in all Southern States except North and South Carolina. Have several contracts on hand for Texas. Northern work is chiefly in Iowa, Indiana, and Illinois.	Pittsburgh, Chicago, and Eastern works.	

Memoranda.—Besides the industries noted in the above table, Louisville is also a large producer of bagging and rope, trunks, picture-frames, and moldings, mineral oils, brick, boilers, cooperage, and bells, upon which I can give no statistics. And there is still a long list of sundry manufactures of minor importance whose export trade either singly or in the aggregate does not figure largely on paper, yet whose importance as a whole to the prosperity of the city is considerable.

Almost all branches of trade in the above schedule are represented in Louisville by a manufacturing and a distributive commerce. To divide a single industry into its

two elements, productive and distributive, without extended and detailed information would of course be impossible. It is aimed in the separation, so far as given in the preceding statistics, to present the leading or controlling characteristics of trade in those classes, as fully as reliable estimates will permit.

Consumptive commerce under the second schedule will properly include the raw materials which come to Louisville for manufacturing purposes. Of these the most important is pig-iron. The consumption of this metal around the falls is about 30,000 tons per annum. The maximum for a single year thus far has been 36,000 tons, and the minimum within the last ten years has been 22,000 tons. This commodity is brought from various sources in Tennessee, Alabama, Kentucky, Georgia, and Ohio, and it varies in price from sixteen to thirty-five dollars per ton, averaging perhaps twenty-five or twenty-six dollars. This important element representing an annual movement of upward of a million of dollars is but one of the many feeders and accompaniments of the consumptive commerce of the city. And it will be noted that not only these accompaniments but nearly the whole of the consumptive commerce itself is a consequence direct or indirect of a city's manufacturing industries. A fact which shows again how vital is the importance of these industries.

In considering the value of Louisville's manufacturing commerce, the leading industries of New Albany and Jeffersonville should by all means be included. For these are largely supported by Louisville capital; the movements of their products are through the channels of Louisville's commerce, and their very existence is more intimately connected with Louisville than with their immediate location.

As it has been impossible, in the time allowed for compiling this article, to present satisfactorily the items of Jeffersonville and New Albany manufacture, the foregoing schedule is given without them.

REMARKS ON DISTRIBUTIVE AND PRODUCTIVE COMMERCE, SUGGESTED BY AN INSPECTION OF THE SCHEDULES I AND II.

Distributive commerce.—An examination of Schedule I develops the following facts with regard to the purely distributive commerce of Louisville:

First, as to extent. North of the Ohio River Louisville's distributive commerce is confined mostly to the country directly bordering on the river and to a limited extent along the railroads leading north from Louisville, the Ohio and Mississippi, the Jeffersonville, Madison and Indianapolis, and the Louisville, New Albany and Chicago. Along these roads at an average distance of fifty miles the distributive trade of Louisville meets the competition of Northern and Western cities, and beyond this distance is practically cut off by such competition. The amount of this commerce is small, not to exceed one-tenth of the southern distributive element. Its tendencies as to credits, &c., are towards shorter time, firmer prices, and general improvement. Being near to Louisville, the sales in this territory are presumably frequent and small, so that from that cause alone it should be a healthy trade.

The Louisville commercial movement in this direction may be termed an aggressive one, i. e., forming a trade which is working towards competitive points and subject to constant and increasing antagonism at every mile from those points. With this class of light custom the river itself forms something of a barrier to trade, preventing in a measure the consumers from visiting our market and causing them to stop at Jeffersonville and New Albany for the minor purposes of their visits. There are also some freight disadvantages to be met with in shipping goods to this territory.

The distributive trade of Louisville north of the Ohio River therefore is not only small in comparison to the same class of trade south of Mason and Dixon's line, but it is undoubtedly of less importance—less thoroughly Louisville's, and less satisfactory even than the supply trade which reaches Louisville from an equal area of country south of the Ohio River, and similarly located as regards this city.

The southern distributive commerce, as indicated by the schedule, is by far the larger and more important of the two movements, although as one consequence of that fact its area cannot be so rigidly defined, the limits of trade on different classes of merchandise being different.

It may be said, however, that the southern distributive commerce of Louisville attains a maximum in Kentucky. What relation this movement bears to the entire commerce from all points which supplies the State with its commodities of consumption, or what proportion of Kentucky's natural products are handled by Louisville, would be impossible to determine at present. But it is safe to say that distributive commerce in Kentucky through Louisville is larger than through any other point in the United States, and also that the Falls City handles directly more Kentucky products than any of its competitors.

Immediately south of Louisville, in the home district, this city has a practical monopoly of trade. To the east and southeast Cincinnati works for and receives a share of the demand, whilst toward the west and southwest Evansville, Saint Louis, and Memphis come in for limited portions.

In Tennessee the influences of Nashville and Memphis distribution appear, and Saint Louis competition grows stronger, although still a large part of Louisville's best trade is located in this State.

Following the lines of railroad outlet to the south, southeast, and southwest, Louisville still controls a fair percentage of distributive trade in East Tennessee, North Georgia, North Alabama, North Mississippi, parts of Arkansas, and Northern Texas (limited as to amount, however, in the last two areas).

Practically, the distributive commerce of Louisville east of the Mississippi River is cut off along a line passing from Vicksburg east through Jackson, Meridian, Selma, and Montgomery, thence northeast to Atlanta, and back via Chattanooga and Nashville. In Arkansas this element of trade is a scattering one. There is little or none of it on the Memphis and Little Rock Railroad, a perceptible amount on the Iron Mountain Railroad (less north of Little Rock than south of that city), and still more on the Little Rock and Fort Smith Railroad, together with some sporadic cases in interior towns in the eastern half of the State.

In Texas we find some of Louisville's distributed merchandise in the northern line of counties between Texarkana and Sherman, along the "Transcontinental Division" of the Texas Pacific Railroad, and some on the main stem of this road, south of these points.

The trade which Louisville obtains in this State, however, on merely distributed merchandise, is mostly the result of extra low prices or long credits and extensions, or both. And even then its amount is limited.

It will be observed of Louisville's distributive commerce that it is essentially a railroad movement. Along the Ohio River it extends but a comparatively short distance, not even to the boundaries of its own State, being cut off on this highway to the east by Cincinnati, and toward the west and southwest by Evansville and Saint Louis.

In the above phase the distributive trade of Louisville is the direct opposite of New Orleans commerce, the last, as has been previously noted, seeking, for the most part, water transportation, and being essentially a river movement.

As a direct result of these two tendencies, the distributing trade of Louisville does not penetrate Louisiana to any extent, for that part of Louisiana east of the Mississippi River is below the line of general limit of Louisville's distributive commerce, whilst that part of Louisiana north of this line is west of the Mississippi River and without railroads.

The reports of Louisville merchants handling her distributive commerce show that it is in a healthy and satisfactory condition, and a legitimate inference from this fact would be that, so long as no new elements of competition or of transportation enter into the problem, this element of Louisville trade will continue to occupy all of its present territory, and be remunerative and desirable in these limits.

Productive or manufacturing commerce.—The first and most important difference presented by Schedule II as to the trade of manufacture compared with the trade of distribution is in the area occupied by that trade.

No longer does it obtain that nine-tenths of the commerce is south of the Ohio River. Its arms extend north, east, south, and west, and in many branches trade is chiefly north of this ancient commercial highway. It is probable that one-third of the value of the whole productive commerce of Louisville will be found to comprise a northern movement, which is sustained in a country bristling with the bayonets of competitive industries.

In many lines of manufacture Louisville is an acknowledged headquarters, and as a consequence her productive commerce in those branches rests on a doubly solid foundation.

When it is remembered that the greater part of her manufacturing interests have been developed since the war, and that these interests are now of the chief importance in her prosperity, whilst previous to 1860 hers was almost purely a commerce of exchanges, another mute but forcible suggestion will be developed as to the course she should pursue and the element she should foster in the near future.

The second noticeable feature in the above movement is the entire absence of direct competition in the Southern States. How long this absence will continue is uncertain, and it therefore behooves Louisville to retain her supremacy and to increase her importance at once if possible.

The third fact, that her manufacturing trade is healthy and the demand for her products increasing, is but a further invitation in the same direction.

Comparing the distributive and productive elements in the total commerce of Louisville the following conditions are developed:

- First. Over seven-eighths of her distributing trade lies *south* of the Ohio River.
- Second. Over one-third of her productive commerce lies *north* of this river.
- Third. Her heaviest competitors in distributing are Saint Louis and Cincinnati.
- Fourth. These cities do not affect her manufacturing interest nearly so seriously.
- Fifth. She meets competition at every step from Southern cities themselves in her distributing trade.

Sixth. Her Southern competition in manufacturing commerce is comparatively nothing.

Seventh. The area of trade is larger and the ties which bind it are stronger in productive than exchanging commerce.

There can be but one inference drawn from these facts.

Concerning New Orleans—

First. That city is not to be considered at all in the branches of Louisville's manufacturing commerce.

Second. In the lines of New Orleans specialties New Orleans overlaps the trade of Louisville.

Third. In general distributive grocery trade Louisville and New Orleans do not meet.

Fourth. In other distributive commerce where Louisville meets New Orleans trade she largely overlaps it and divides that trade with New Orleans.

Before closing this article it is relevant to its purposes to look for causes which promise to influence Louisville commerce and to develop the tendencies of that commerce by the light of such influences.

From the review of the present condition of trade just concluded, it is seen that the market of Louisville in the lines of such general commodities as she merely distributes is limited and modified in every direction by her surrounding and competitive sisters.

The problem of determining how far a city can extend her distributive commerce successfully, as noted in the early pages of these remarks, is determined, first, by her location, and second, by the avenues of transportation which carry the merchandise of the country over the areas which that city wishes to penetrate.

As the location of Louisville is fixed, and events of the past show that it has been in a favorable situation for distributing purposes, the freight tariffs to her markets form the practical measure of her ability to enter those markets.

The city which can bring its customers nearest to the sources of supply or production for the quantities of merchandise which they consume will control the trade of those customers.

Where two cities have equal facilities in this regard, then, that one is successful which is willing or able to stand the greatest shading of prices, quality being equal.

This fact in distributive commerce creates a belt (of greater or less width, and constantly varying in area, with fluctuations of prices), in which the trade of competitive cities is constantly overlapping.

A change in tariff rates of freight over competitive lines, or in the lines themselves by extension, or in general avenues of transportation by adding to their number, will affect directly the position of this belt of overlapping trade and bring corresponding changes to both forms of commerce which enter the territory thus affected.

Are changes of this nature likely to enter the areas of Louisville's productive or distributive commerce?

Omitting the considerations of river transportation for reasons heretofore mentioned, it is first to be noted that the movement of merchandise from Louisville toward the South can only take place under the auspices of a single corporation—the Louisville and Nashville and Great Southern Railroad. For, as this road controls the Louisville, Paducah and Southwestern Railroad (which formerly afforded an outlet via Elizabethtown to Paducah, connecting at that point with the Paducah and Memphis Railroad, whose outlet again is Troy, Tenn., on the Mobile and Ohio Railroad), the one corporation has the entire arbitration of freight rates from Louisville to its great Southern markets, a fact which leaves the vital commerce and prosperity of Louisville at the mercy of said corporation.

Theoretically this fact should not militate against the commercial interests of Louisville; for, as this city is dependent upon the railroad for its prosperity, so is the railroad largely dependent for its revenue upon the commerce of the city. Nearly all that tends to build up the city and increase its trade adds to the prosperity of the road and increases its business. Hence the railroad should take the initiative in making low rates of freight, to competitive points at least; and then Louisville's commerce would only be impeded by the competitive influences outside of transportation of such other cities as seek with her a common market for their merchandise. This condition of affairs would be just and equitable.

An idea of the exact relation of the Louisville and Nashville Railroad to the prosperity of the city may be obtained from the published reports of the railroad issued annually; said report for year ending July 1, 1879, is not yet out.

From the last report on internal commerce, page 221 of Appendix, the ratios obtaining during year ending July 1, 1875, may be derived. At that time the total freight going north over the Louisville and Nashville Railroad was 135,976,555 pounds. Of this amount, 23,226,485 pounds stopped at Louisville, being a little over one-sixth of the total. Going south the total was 160,454,506 pounds; of which Louisville shipped 57,719,487 pounds, or nearly three-eighths of the entire amount.

In justice to our southern outlet it must be stated that the rates of freight from

Louisville to points south and southeast reached over this road have been for the most part competitive and satisfactory.

Concerning the rates southwest to the Arkansas and Texas territories (alluded to as formerly owned almost by Louisville but later entered and largely controlled by Saint Louis), the tendency now is also toward equitable rates, and such rates exist. This tendency, which should have been initiative on the part of the railroad, came only after Louisville had lost much Southwest trade, and the road consequently felt a diminution of freight business.

From the opening of the Iron Mountain Railroad until 1876 the rates of freight from Saint Louis to points in this territory were notably less than those from Louisville to the same points.

Had the Memphis and Louisville branch of the Louisville and Nashville Railroad, acting in concert with the Memphis and Little Rock Railroad, combined rates with the Iron Mountain, and farther south with the Texas Pacific Railroads, Louisville might have retained a large part of trade which then left her. After this loss such a combination between the railroads above mentioned was accomplished, and for the past two or three years Louisville has been enabled to deliver her commodities to most points in Arkansas and some places in Texas at the same tariff charged by Saint Louis.

It is true, also, that the problem of arranging a freight tariff from Louisville to the territory in question which should present the desired aspect, is one that has always offered some elements of difficulty. These elements, which are all such as favor Saint Louis and militate against Louisville, are as follows:

The Saint Louis, Iron Mountain and Southern Railroad leads from Saint Louis to Texarkana, one of the gateways of Texas, and is a grand trunk line 500 miles in length, under the control of one corporation. This railroad, built largely by Saint Louis capital, and operated entirely in the interests of Saint Louis and against all interests opposed to Saint Louis, would form a powerful and subsidized opponent to any combination in favor of Louisville at the outset. And when it is remembered that the bulk of Louisville freight for one-half of Arkansas and all of Texas would naturally pass over this very road, its opportunities for effectively opposing Louisville interests become magnified.

In order to get Louisville freight into Arkansas by rail it is necessary, or at least desirable, that it should first pass over the Louisville and Nashville, second over the Memphis and Little Rock, and third over the Iron Mountain Railroad itself. In this assertion the freight shipped by both Louisville and Saint Louis to points on the Little Rock and Fort Smith Railroad and the Memphis and Little Rock Railroad is lost sight of. Neither will this freight materially affect the problem, for with the former railroad Louisville and Saint Louis stand on an equal basis. The corporation is a monopoly, and neither cities nor corporations have thus far been able to influence its course of action or policy in the least, and freight once delivered at Little Rock for points on this road must pay tariff rates beyond (except in times of high-water in the Arkansas River, when some points become competitive and their demands for cheap transportation are effective).

The Memphis and Little Rock road does not figure; for neither Louisville nor Saint Louis ship an appreciable quantity of goods to territory reached by this road, such territory being supplied chiefly by Memphis and the balance by Little Rock.

The Iron Mountain road, in consequence of its interests, as above noted, has always pursued a policy of enmity towards the Memphis and Little Rock and Memphis and Louisville roads, sometimes refusing entirely to take freights from those sources and at all times giving preference in transportation to Saint Louis merchandise. Several railroad wars, as a consequence, have resulted, and freight from Louisville for South Arkansas or Texas is at all times subject to delays from misunderstandings of this nature, which may arise with the slightest provocation.

The policy of the Memphis and Little Rock Railroad has always been in harmony with the interests of Louisville, as would be inferred from the fact that the Louisville and Nashville Railroad has always been its chief feeder.

And whether in the past the Louisville and Nashville Railroad has done all in its power to secure proper competitive freights to the territory mentioned is not now a material point.

It has undoubtedly in recent years been helping Louisville to get back the Arkansas and Texas trade, but from the nature of the influences now existing it will be impossible to do this.

One more element has but recently developed itself. On Sunday, June 29, of the present year, the gauge of the Iron Mountain road from Saint Louis to Texarkana was changed to "standard," 4 feet 8½ inches; so that cars may now be run from Louisville to Texas without breaking bulk. This is, of course, a favorable circumstance for Louisville, but even now it is to be seen that Louisville freight for Arkansas and Texas is liable to be seriously delayed in transit.

Is there a remedy? The only one that so far has been proposed is this, viz., to run a

road from Memphis to Texarkana to connect at the latter point with the Texas Pacific Railroad. This would equalize and perhaps solve the freight problem, both as to rates and time in transit, for Central and Southern Arkansas, and open up anew to Louisville the whole trade of Texas. But it is hardly probable that this will be done, as the influences of the Texas Pacific will all be brought to bear upon the extending of the western end of the line from Fort Worth and Weatherford; aside from which the country from Memphis to Texarkana is one-half swampy, and road building through it is exceedingly difficult. This part of the territory would be too poor to help build a road and would not furnish freight enough to help pay running expenses after it was built—a fact which is shown by the disastrous experience of the three railroads which have penetrated the same country through a similar longitude (viz, The Arkansas Central, a narrow-gauge road from Helena to Clarendon; the Little Rock, Pine Bluff and New Orleans, extending from Pine Bluff, Ark., to Chicot City, on the Mississippi River, and back west to Collins Depot, and last the North Louisiana and Texas, running from Vicksburg, Miss., to Monroe, La.). These have all failed to pay not only upon first investments, but frequently after the original capital had been sunk entirely, and the road started under new auspices, the result was far from being promising.

This condition of affairs existing, and the prospect not being immediate for any change, it is probable that any advance made in Louisville's southwestern trade will be in spite of these drawbacks. Such advance can hardly be made in distributive commerce, and it therefore remains for her to push out her productive commerce.

To the South the commerce of Louisville is safe so long as no more railroads penetrate the country in the commercial interests of any of her competitors. But at the present time such a road is in the course of actual construction. I refer to the Cincinnati Southern. This road is now completed from Cincinnati to a point south of Somerset, Ky. Its proposed terminus is Chattanooga, Tenn. The direct effect of its completion will of course be to open up the section of Eastern and Southern Kentucky and East Tennessee to the trade influences of Cincinnati. This area of country has in the past been largely tributary to Louisville commerce, except in the extreme northern part, which has been tapped by the Kentucky Central (extending, as before remarked, from Cincinnati to Nicholasville, south of Lexington) and is a feeder to Cincinnati.

When completed to Chattanooga, a result which is expected by January 1, 1880, Louisville will feel the effect of this new competitive avenue very sensibly. Her remedy will be to protect herself by using this same, with existing connections, and entering the field with Cincinnati.

Two other lines of railroad which will affect the commerce of Louisville favorably, by increasing the avenues of transportation between Louisville and points of supply for her distributive goods, promise soon to be constructed.

The first is the missing link of the Chesapeake and Ohio road from Mount Sterling, Ky., to Huntington, West Va. This road when completed will be a competing line from Louisville to the Atlantic seaboard, and will give to this city additional advantages for her importations. A survey for this portion of the road is now in progress, under the direction of General St. John, and it is believed the road will be completed within a year or two.

The Saint Louis Air Line is the second avenue referred to, which is to run from New Albany, Ind., to Mount Vernon, Ill., through the counties of Floyd, Crawford, Dubois, Pike, and Gibson, Ind., and Edwards, Wayne, and Jefferson, Ill., where it will strike the Saint Louis and South Eastern at Mount Vernon. This road is completed from Princeton, Gibson County, Indiana, to Albion, Edwards County, Illinois. The prospect is now fair for the completion of the missing portions at an early day.

When finished it will open to Louisville a new market for her merchandise and increased facilities for obtaining such supplies as come to her from the West, and to this extent will quicken both her distributive and productive commerce. The effect will be a similar one, though from an opposite direction to that exerted by the opening up of the Chesapeake and Ohio.

Another element which, from the experience of the past two years, promises to exert a periodic and temporary influence upon the commerce of Louisville is yellow fever in the South. If this scourge continues to return annually to Memphis and New Orleans, a large number of Memphis merchants ought, if proper inducements were offered them, to seek Louisville as a location for future business operations. Aside from this possibility, the fact remains that, during such epidemics as may visit the country, the trade of Louisville and all other cities will be cut off in localities visited by the plague.

The quarantines will make it impossible for merchandise to be shipped west of the Mississippi River; and markets east of that river will suffer material depression unless measures are taken to make Louisville a necessity to the South in some such way as has been suggested—for instance, to make of her an important interior cotton market.

At all events, if she does not continue to cement her relations with the South by active contact and vigorous aggressive commerce, these relations will weaken, and the territory will be occupied by others.

CONCLUSION.

It is in the midst of such surroundings and influences as these that the Falls City is at present situated. The reputation of her merchants for honesty, liberality, and square dealings is at the head of the list among cities doing business in the South.

Competition is heavy, but not overwhelming. It is hardly possible for any tendency to be developed which will return to her the old territory of her distributive commerce, or, in fact, materially increase the area which at present she successfully occupies as a point of exchange.

The developments of each succeeding year would seem to place new barriers in the way of enlarging a purely distributive commerce. But energy and vitality will retain to her the large territory which she already controls, and which is a material element in her prosperity.

On the other hand, the surroundings on every side suggest and invite the rapid increase of her manufacturing facilities. Not only is there every inducement in the way of commercial circumstances for her to build for herself a successful future, but there are also tendencies in that future which warn her to seize and profit by the present while she may.

Finally, therefore, it would seem that every indication pointed conclusively to one lesson, as does the history of every successful large city in the interior of the United States.

Foster your distributive commerce so far as it is possible to do so, and thus bring within the area of your influence a territory which shall be tributary to you. Gather its products; show that you have a good market for those products, and supply in time that area with its commodities of consumption. But with still greater care foster and build up your manufacturing industries, for upon them depends your greatest, your most vital, and your most lasting prosperity. History shows that the constant changes which are going on in immigration and in avenues of transportation may in a short time greatly impair or almost destroy the distributive commerce of any locality, whilst permanent prosperity comes hand in hand with productive industry. Keep the railroad arms of commerce extended at least as far as those of competitive sister cities, and bind all trade to you by the facilities of cheap and rapid transportation. Do these things and grow into a lasting and extensive prosperity. But close your eyes to the experiences of the past, the warnings of the present, and the tendencies of the future, and it may be learned too late that "the beauty of the Chaldee's excellency has gone down."

APPENDIX NO. 15.

INFORMATION FURNISHED BY MR. HENRY G. HESTER, SECRETARY OF THE COTTON EXCHANGE OF NEW ORLEANS, IN REGARD TO THE COMMERCIAL AND TRANSPORTATION INTERESTS OF THAT CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, JUNE 30, 1879.

Question 1. Please to present such general facts as will indicate the course of the commerce of New Orleans with foreign countries, during the last six years, with especial reference to the year 1877-78.

Answer. The statistics of the commerce of New Orleans for the six years ending August 31, 1878, show little or no increase in the exports (aside from cotton and grain), while the imports have sensibly diminished. The gradual increase of acreage in cotton in the Mississippi Valley, and cheapening of ocean freights (the latter a natural consequence of deep water at the mouth of the Mississippi River, by which a larger and numerous class of vessels, hitherto excluded, has been admitted to the trade), and improved compressing of cotton, by which 25 to 40 per cent. increase in the carrying capacity of vessels has been gained, enabled more successful competition, by which has been gained an increase of receipts of the staple. To the success of the jetties and more abundant and cheaper river and ocean freight-room, New Orleans is also indebted for a marked increase in her grain trade. In point of value, however, the export business shows a heavy reduction; a fact largely due to the shrinkage of prices for all articles of commerce, which has been universal and has materially affected every exporting city of the United States. Our import trade shows similar features, though aside from any shrinkage in values, it has fallen off decidedly. The following, compiled from the custom-house records, is of interest in this connection:

Value of Imports and Exports, port of New Orleans, August 1 to July 31.

Years.	Imports.	Exports.	Total.
1877-78	\$11,433,420	\$84,831,724	\$96,265,144
1876-77	9,050,422	69,674,227	78,724,649
1875-76	11,499,777	84,194,496	95,694,273
1874-75	12,356,469	71,617,390	83,973,859
1873-74	14,534,164	91,418,495	105,952,659
1872-73	19,932,180	104,686,530	124,618,710

The general stagnation in trade the world over partially accounts for the decrease in imports, but a large proportion of the falling off in the value of the exports is due to the remarkable decline in the price of raw cotton. The latter is shown more clearly by the following statement:

Foreign shipments of cotton from the port of New Orleans.

Years.	Bales.	Average price per bale.	Total value.
1877-78	1,453,096	\$48 00	\$69,748,608
1876-77	1,204,591	52 00	62,638,732
1875-76	1,363,005	52 65	71,662,213
1874-75	995,270	65 40	65,090,658
1873-74	1,148,395	69 58	79,764,164
1872-73	1,177,127	84 37	99,314,204

Question 2. Please to present a table showing the average monthly rates which have prevailed for the transportation of cotton, wheat, and corn, from New Orleans to Europe during the last year.

Answer. This question is best answered by giving the figures in the following form:

Freights to Europe during year 1877-'78.

COTTON.

Month.	Highest.		Lowest.		Closing.	
	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.
1877.	d.	d.	d.	d.	d.	d.
September	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
October	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
November	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
December	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
1878.						
January	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
February	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
March	$\frac{1}{2}$ to	$\frac{1}{2}$ to	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$ to	$\frac{1}{2}$
April	$\frac{1}{2}$ to	$\frac{1}{2}$ to	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
May	$\frac{1}{2}$ to	$\frac{1}{2}$ to	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
June	$\frac{1}{2}$ to	$\frac{1}{2}$	$\frac{1}{2}$ to	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
July	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
August	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

BULK GRAIN.

1877.						
September	9 $\frac{1}{2}$	9	9 $\frac{1}{2}$	9	9 $\frac{1}{2}$	9
October	12	10	9 $\frac{1}{2}$	10	10 $\frac{1}{2}$	10
November	10 $\frac{1}{2}$		10 $\frac{1}{2}$		10 $\frac{1}{2}$	
December	10 $\frac{1}{2}$		10 $\frac{1}{2}$		10 $\frac{1}{2}$	
1878.						
January	10 $\frac{1}{2}$		10 $\frac{1}{2}$		10 $\frac{1}{2}$	
February	10 $\frac{1}{2}$		10 $\frac{1}{2}$		10 $\frac{1}{2}$	
March	10 $\frac{1}{2}$		10 $\frac{1}{2}$		10 $\frac{1}{2}$	
April	9 $\frac{1}{2}$	9 $\frac{1}{2}$ to 9 $\frac{1}{2}$	9	9	9	9
May	10	9 $\frac{1}{2}$	9	9 $\frac{1}{2}$	10	9 $\frac{1}{2}$
June	9 $\frac{1}{2}$ to 9 $\frac{1}{2}$	9 $\frac{1}{2}$	6	9 $\frac{1}{2}$	7	9 $\frac{1}{2}$
July	9	9 $\frac{1}{2}$	7	9 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$
August	8 $\frac{1}{2}$	9 $\frac{1}{2}$ to 10 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	8 $\frac{1}{2}$	10 $\frac{1}{2}$

NOTE.—Freights to Great Britain are quoted in pence and to continent in cents; for convenient reference the whole has been reduced to pence.

Question 3. Please to present a statement showing approximately the gross proceeds of freight of a ship of given tonnage, say 1,500 tons, from New Orleans to Liverpool at current freight rates, if loaded with corn or with cotton.

Answer. The carrying capacity of a vessel can be estimated approximately only, as the shape or build causes a material difference in the proportion of what is called "dead weight" to net capacity.

A ship of 1,500 tons register will, if loaded to her full capacity, carry about 2,250 tons dead weight.

Taking this as a basis, the comparative gross freight on cotton and grain will be—

Cotton: 6,000 bales, averaging 450 pounds = 2,700,000, at $\frac{1}{2}$ d. and 5 per cent. primeage	£4,429 13 9
Grain: 84,000 bushels of 56 pounds, at 9d. per 60 pounds and 5 per cent. primeage	3,087 0 0

Above represents the gross receipts of a vessel loaded with cotton and grain at rates about a parity. The charges to the ship are, on—

Cotton: Compressing, 50 cents, and stevedoring, 50 cents, per bale, say on 6,000 bales = \$1,000, exchange at 4.86	£1,234 11 4
Grain: Platforms, shifting boards, &c., \$320, and trimming, at \$1.50 per M bushels, \$123 = \$446 =	91 15 2

In addition to above, a commission of 5 per cent. on gross freight is paid to ship-broker for negotiating cargo.

In estimating cotton freights, 4 bales to the registered ton, is a fair average since the recent material improvements in cotton compressing.

Where full cargoes of cotton are taken, more or less ballast has to be used, the weight of the cotton alone not being sufficient. Grain, on the contrary, is sufficiently compact to serve as its own ballast, but up to a recent period full cargoes of grain made vessels draw too deeply to easily get through the channel at the mouth of the Mississippi River, and it was found desirable to load partly with grain and partly with cotton.

It is proper to state here that there is now (in 1879) no obstacle whatever at the mouth of the Mississippi River, the depth of water at the jetties being sufficient to float the largest class of ocean vessels loaded to their fullest capacity with grain.

Question 4. Please to present a statement in regard to any efforts which may have been successfully made during the two years past for the extension of the commerce of New Orleans towards the North, the East, and the West by means of the construction of new railway lines, the formation of combinations between existing lines, or by the establishment of fast freight lines.

Answer. No new railway lines have been completed within the period above specified. The Mississippi Central Railroad and the New Orleans and Jackson Railroad have been reorganized as the Chicago, Saint Louis and New Orleans Railroad Company, and are now run in connection with the Illinois Central as one line from New Orleans to Chicago and Sioux City. This company is now, by its arrangement with other and connecting lines, north and west of Cairo and east of Milan, issuing through bills of lading to all sections in the North, East, and West, and is shipping goods in bond to all points.

Material efforts have been made to turn cotton this way from Memphis in competition with northern and eastern rail-routes, and have been successful in largely increasing our trade from that section.

Within the past few years quite a change has taken place in some farming or gardening interests. In former years all the farm-yard produce, including fowls of all marketable descriptions, also all vegetables and fruits (except those indigenous to our soil, and then only to the extent of the local demand), came to this market from points beyond and north of Louisiana. There were some gardens in and around New Orleans that partially supplied the daily markets with small vegetables, but nothing more. All the eggs, chickens, potatoes, and esculents of every description were imported chiefly from the West, the local production being extremely limited. Seeing how profitable such industries might be rendered, the present managers of the Chicago, Saint Louis and New Orleans Railroad undertook to give encouragement to small farming of this kind, and in an incredibly short time succeeded in so far stimulating it that now it is a widely-extended interest, to be found not only in the parish of Orleans, but in all the contiguous parishes. The production of potatoes, cabbages, cucumbers, beans, beets, and early vegetables of every description has become sufficiently great to justify the running of fast-freight trains for their transportation, along with tropical fruits imported from the islands of the Spanish Main and from Kuanan and the States of Central America. Not only has the road named established fast-freight trains for the purpose mentioned, but ventilated cars have been constructed for the special purpose of giving safe transfer to perishable fruits and vegetables. The time (New Orleans to Chicago) by these trains is eighty hours and fifteen minutes, and correspondingly to other points in the West and East. Large amounts of fruits and vegetables have thus been distributed, especially of the early varieties, as far east as Detroit and Baltimore, and as far west as Kansas City and Denver.

Question 5. Please to present any facts of interest touching the construction of new railway lines from New Orleans into the interior, and also any views which you may entertain in regard to the importance or probable results of such railway construction.

Answer. Louisiana undoubtedly ranks, in her railway system, among the most backward States in the Union. Aside from the two trunk lines leading north and east in the direction of Mobile, Ala., and Jackson, Miss., both of which traverse a very limited portion of her territory, she has only fragmentary portions of lines, owned and controlled by non-residents almost exclusively.

About two years ago a company of citizens of the State was formed under the title of the New Orleans Pacific Railway Company, for the purpose of constructing and equipping a line to connect New Orleans with Shreveport, on Red River, and with Marshall, Tex. This line, when completed, will be 360 miles in length, running from south to north, with a westward inclination, through, probably, one of the most healthy and productive sections of the United States. So far over 200 miles have been graded, and the company has in negotiation a proposition to obtain control of the New Orleans and Texas road (about 70 miles) to Bayou Goula, leaving about 60 miles of comparatively light grading in a salubrious region to give a continuous road-bed from New Orleans to the northeastern terminus on Red River. The Donaldsonville road, now completed, has recently been purchased. The construction of the New Orleans

Pacific Railroad, owing to the absence of engineering difficulties and large streams to cross, will probably involve as small, if not a smaller, outlay per mile than any railroad that has yet been built in this country. Estimates of cost of construction and equipment, carefully made by the chief engineer of the road, and acquiesced in by engineers of established reputation and leading railroad men, put the maximum average at \$14,000 per mile, including everything complete, and with the most approved steel rails.

A glance at the map will show not only the importance of this road in developing the wonderful agricultural resources of a great State, but also its advantage to the United States when finally completed.

It will give the most serviceable route to the Eastern seaboard for the cattle, wheat, corn, rye, cotton, hides, wool, tallow, lard, peltries, and numerous other articles from Upper Texas, and connecting at Marshall with the Texas system of railroads and the lines leading from Memphis and Saint Louis.

It is certain that with the opening up of this line new life would be infused into our commonwealth. Singularly enough nearly every dollar of the money for the New Orleans Pacific road has, notwithstanding their poverty, been subscribed by citizens of Louisiana.

Contrary to expectation the successors of Charles Morgan were the first to give assurance of rail connection between New Orleans and Texas. In purchasing the road and franchises of the old New Orleans, Opelousas and Great Western Railroad several years since, Mr. Morgan secured, in addition to the completed road from New Orleans to Brashear City, the graded road thence to Opelousas. This latter section is now being constructed rapidly, trains already running to New Iberia. Vermillionville will be reached by November 1, 1879. At that point the Morgan road connects with the Orange and Vermillion Railroad, which is nearly all graded, and on which track-laying is being pushed forward as rapidly as possible. By January 1, 1880, at the furthest, the long-desired through rail route to Houston will, therefore, be realized. It is beyond question that this road will result in a large addition to our cotton trade. As in the case of the Mobile road, cotton will come direct to the largest market where there are abundant facilities and comparatively low ocean freights.

Messrs. Whitney & Co. (successors of Charles Morgan) also announce that they will continue construction from Vermillionville on through Opelousas, but have not indicated how far or in exactly what direction. It seems probable they will endeavor to make connection with the Texas Pacific at Marshall at an early date, either by building the extension themselves or inducing other capitalists to aid them, as in the case of the Houston route.

Question 6. Please to present a table showing, approximately at least, the tonnage received at New Orleans by river and by each one of the leading railway lines during the year 1877, also a similar table showing shipments.

Answer. Tonnage received at and shipped from New Orleans during, say, commercial year ending August, 1878—

	Received.	Shipped.
By Mississippi River.....	1,200,000	400,000
By New Orleans, Saint Louis and Chicago Railroad.....	192,000	79,650
By New Orleans, Mobile and Texas Railroad—Morgan's Texas Railroad.....	200,000	225,000

Above figures, except those of the New Orleans, Saint Louis and Chicago Railroad, are entirely estimates, though probably very close to the actual movement.

There is no record of any kind kept in New Orleans by which the quantity of many heavy articles received can be ascertained, and in the last report some of these were overlooked. In the 1,200,000 tons receipts by river are included 371,000 tons of coal.

Question 7. Please to present any facts of interest pointing to the probable development of a grain traffic from New Orleans to Europe in competition with the Eastern movement on railroads and on the lakes and Erie Canal, connecting the Northwestern States with the Atlantic seaboard.

Answer. Practically, the same issues are involved as in the competition between the Erie Canal and the trunk lines. The water-route has natural advantages and a possible minimum rate of carriage that ought to secure a very large business. The railway has vast capital, fertile inventive spirit, and consummate business tact at its back. The contest has thus far been most favorable for the railway, even on the direct water-route from Chicago to the Atlantic seaboard. Down the Mississippi we have the advantage of steam and a greater depth of water, with more play in handling fleets of barges, but we have to follow the two sides instead of the hypotenuse of the triangle. Our water-route has to overcome the disadvantage of a longer distance to move the grain of the West through the mouth of the Mississippi. We shall have to establish a rate of transportation from Saint Louis to New Orleans which is extremely low, compared even with former figures on the same route, to enlarge the grain traffic to proportions commensurate with the augmented movement from the three large Atlantic ports.

It has been clearly demonstrated that a rate of one mill per ton per mile can be reached on a canal of certain practicable size with steam motive-power, and afford a profit to the carrier. The Mississippi at present affords a natural water-way larger than human labor can construct. Its bars present some serious obstructions, but these can be removed at slight expense compared with the general result accomplished, as demonstrated by the Eads jetties at the mouth of the great stream. It is practicable, and, indeed, now one of the probabilities of the future, to enlarge the capacity of the Mississippi so that fleets of barges drawing 10 feet of water, and bearing even half a million bushels of grain, can be moved to New Orleans at a cost of less than 2 cents per bushel. Even now these river argosies arrive with 700 car-loads of merchandise, making almost as good time as the freight train.

We sadly need competition in barge lines to fully develop the advantages of the river route. There is but one barge line plying between Saint Louis and this city, owned by a few individuals, the profits of which must have been very large. Competing only with the cross routes, and having a sufficiently large local business to insure liberal dividends, the rates on bulk grain have nevertheless been steadily reduced until they are now only 5 cents per bushel from Saint Louis to New Orleans. This of course affords no test of the question of river-transportation, even under present circumstances. Active competition between several large barge companies could alone establish the minimum cost under favorable conditions.

All things considered, there is reason to predict that having secured deep water at the mouth of the Mississippi, insuring the passage of the largest steamers with full grain cargoes, the solution of the other questions is only a matter of time; and that New Orleans will continue to grow in importance as a grain market not only in the ratio of the expanding aggregate exports of cereals from the United States, but in proportion to the natural advantages, which only need skill, energy, and capital to be fully utilized.

Question 8. Please to present a table showing the number of bales of cotton shipped out of the Gulf States and the number of bales shipped from New Orleans during each year since 1865.

Answer. See following table:

Comparative shipments of cotton from seaports of Gulf States, and from ports of New Orleans, from September 1, 1865, to August 31, 1878.

Years.	Gulf States.	New Orleans.
	<i>Bales.</i>	<i>Bales.</i>
1877-78	2,590,172	1,708,945
1876-77	2,061,545	1,396,922
1875-76	2,258,334	1,582,981
1874-75	1,690,719	1,189,296
1873-74	1,901,324	1,348,282
1872-73	1,909,844	1,406,028
1871-72	1,472,267	1,067,453
1870-71	2,166,864	1,541,850
1869-70	1,662,565	1,185,060
1868-69	1,178,013	842,405
1867-68	1,092,104	681,692
1866-67	1,264,787	807,316
1865-66	1,803,978	768,548

Question 9. Please to present in tabular form a statement showing the name of each line of steamers plying between New Orleans and foreign ports, the number of steamers in each line, the aggregate tonnage of vessels composing such lines, and the foreign ports at which they touch and trade.

Answer. See following table:

Steamship lines between New Orleans and foreign ports.

Name of line.	Number of steamers.	Aggregate tonnage.	From New Orleans to—
Balizo-Honduras Line	1	454	Balizo, Honduras.
Vera Cruz Line	3	4,677	Havana and Mexican ports.
Tampa Steamship Company's Line	2	1,119	Florida coast and Havana.
Havana and Key West	1	779	Key West and Havana.
New Orleans, Florida and Havana	3	1,948	Havana, Key West, and Cedar Keys.
North German Lloyd	4	9,477	Bremen, via Havre, Southampton, and Havana.

Steamship lines between New Orleans and foreign ports—Continued.

Name of line.	Number of steamers.	Aggregate tonnage.	From New Orleans to—
Southern Mail Steamship Company	1	1, 100	Key West and Havana.
Liverpool Southern Steamship Company	17	27, 360	Liverpool, via West Indies.
Mississippi and Dominion Line	7	14, 227	Liverpool, Curana, and Havana.
Blythe's Line	4	4, 800	Liverpool.
Serra Line	6	6, 732	Liverpool, via Havana.
Papayanni Line	4	8, 583	Liverpool.
West India and Pacific Steamship Company ..	12	22, 245	Liverpool and all West India and Mexican ports.
Watts, Milburn & Co.'s Line	4	4, 847	Liverpool.
Liverpool, Brazil and River Platte Line	7	9, 748	Liverpool, Rio de Janeiro, Pernambuco, Buenos Ayres.
French Transatlantic Line	3	5, 284	Barcelona and Marseilles.
Total	79	123, 380	

Vessels plying between New Orleans and Liverpool touch at intermediate or other points only when coming from Liverpool. They take from New Orleans only direct freight for Liverpool.

Question 10. Please to present as succinctly as possible your views as to the measures which should be adopted for promoting commerce between New Orleans and foreign countries, especially with Mexico, Central America, the West Indies, and South America.

Answer. The absence of proper reciprocity treaties affording relief from the enormous duties levied against American products, and which virtually prohibit their importation into those countries, is a serious obstacle to the enlargement of our commercial relations with Mexico, South and Central America, and the West Indies.

It is not here advisable to discuss the question of free trade *versus* protection; whatever may be the theoretical advantages of either, it is certain that protection is, in this connection, carried to such an extent by our near neighbors as to "grind the face of the poor" by preventing the introduction of cheap food, that home industries and products may be fostered.

Aside from our cotton trade, which amounts to nearly 43 per cent. of the entire exports of that important product from the United States, the principal hope of New Orleans for the extension of her foreign commerce is in the promotion of trade between the Great West and our Spanish American neighbors. Want of sufficient capital, mainly due to distrust occasioned by the disturbed condition of our political affairs, now happily more settled, has also been a leading factor in the problem of how this trade is to be controlled; but, with proper and legitimate assistance from the government in revising treaties, &c., and the establishment of a line of steamers intrusted with carrying the United States mails, no difficulty need be apprehended on that score for the future. As in every commercial transaction, all things being equal, the question of transportation from the West to foreign consuming centers of the surplus crops has been merely a matter of dollars and cents.

Up to within the past two or three years it evidently did not pay to ship by the Mississippi River and Southern rail routes, or we should have handled more Western produce. This and last season, however, we have sensibly increased our shipments of grain, as will be seen by reference to table given elsewhere in this report.

For this improvement, as has been stated in answer to a previous question, we are largely indebted to an increased inland tonnage on the Mississippi River, and to the efforts of the railroads connecting New Orleans with the West; their competition with other routes having reduced rates to a point that admits of shipments at figures which, in connection with more moderate average ocean rates, are at a parity with eastern sea-ports. Nothing short of an indirect "subsidy" would, from the outset, maintain a line or lines of steamers to South American ports in competition with the lines plying between Europe and those ports. I use the word "subsidy" because it has been used in this connection in various petitions presented to Congress within the past year or two favoring such lines.

The "subsidy" desirable is a contract from the Post-Office Department for carrying the United States mails, at a fair rate of compensation, commensurate with the importance of the objects to be attained.

At present our intercourse with our South American neighbors is too uncertain, and want of proper mail facilities practically removes them, though so to speak at our very doors, farther from us than we are from some of the remotest countries of Europe.

To quote from a recent memorial of our chamber of commerce, "the enormous disproportion between our national trade with Europe and with the countries and colonies of our own continent is shown by the fact that while our whole foreign trade

amounted in 1876 to \$1,131,141,499, our trade with the countries of this continent south of the United States was, according to the statement of the Secretary of the Treasury, but \$125,000,000, while the whole foreign commerce of these countries was \$530,000,000 for the same year."

This unequal and unnatural course of commerce is due, as the memorialists state, entirely to two causes:

1st. "The want of proper commercial treaties and conventions between our government and those of the countries and colonies referred to.

2d. "The want of adequate facilities of commercial intercourse between the United States, and especially its Western interior, and the countries and colonies referred to."

That the governments of England and France, who enjoy the greatest part of this tropical trade, appreciate its importance, is shown by the fact that England pays a subsidy of \$930,000 per annum for the Central South American and West India Royal Mail Steamship Company and the Pacific Steamship Company, and that France pays \$1,519,451 per annum to the "Compagnie des Messageries Maritimes" et "Compagnie Grand Trans-Atlantique," which lines transport the products of the tropics to those countries.

The Postmaster-General, referring to the necessity for improved postal facilities with South America, also says:

"There is no portion of the world with which the United States has as unsatisfactory mail arrangements as with South America.

"The correspondence for Brazil and other countries on the east coast, in the absence of any direct mail steamship communication, is forwarded via England, and the correspondence for other countries on the west coast, sent via Panama, can only be prepaid to ports of debarkation on that coast, with no assurance of its being forwarded to interior destination, and always leaving a local charge, excessive in amount, to be collected from the addressees on its delivery."

(The latter has, I believe, since been rectified through governmental action.)

In view of the known facts, such a statement, emanating from so high a source, serves to enforce the necessity for prompt governmental aid in securing proper communication, more especially when such aid is the merest trifle compared with the results to be obtained. As the initial point for this Spanish-American trade, New Orleans holds out many inducements. It is semi-tropical. Louisiana was originally settled by the Latin races, and her population to this day contains a large percentage of Spanish and French and their descendants, who are probably, in habits, inclinations, and tastes, more nearly like the inhabitants of Spanish-American countries than any other people in the United States; for this reason alone New Orleans is known and looked to by these people, and, with convenient transportation, would be largely visited by them.

A line drawn from Chicago to the port of Aspinwall via New Orleans would show a length of about 2,400 miles by rail and steamer, with a running time of about six and a half days. From Chicago to Aspinwall via New York would be about 3,500 miles by rail and steamer, with a running time of eight and a half days. Indeed, as stated by the memorial above quoted, the adoption of a steam postal service from New Orleans to Aspinwall would not only effect a great saving of cost to the government, but a day and a half between Aspinwall and New York over the present connection between those two points. An approximate saving of time could be made between Western trade centers and nearly every other port of any consequence of our southern neighbors.

Question 11. Please to present a statement showing the quantity and value of the principal products of the State of Louisiana during the year 1878.

Answer. See following table:

Quantity and value of the principal products of Louisiana and percentage shipped out of the State.

Products.	Quantity.	Estimated value.	Per cent. of products shipped out of the State.
Rice	barrels..... 162, 180	\$2, 108, 000	73
Sugar	pounds..... 251, 088, 860	13, 182, 000	86
Molasses	gallons..... 14, 814, 024	3, 889, 000	86
Cotton	bales..... 610, 000	27, 430, 000	100
Total		46, 629, 000	

Above is estimated value of actual production of sugar, molasses, and rice. The cotton crop of the State is estimated.

Question 12. Please to present in tabular form the quantity of flour and grain received at New Orleans during years 1850 to 1878, inclusive.

Answer. See following table:

Quantity of flour and grain received at New Orleans during the last twenty-nine years.

Years.	Flour.	Grain.
	<i>Barrels.</i>	<i>Bushels.</i>
1850-'54 *	4, 143, 240	25, 741, 498
1855-'59 *	5, 708, 402	28, 627, 422
1860-'64 *	2, 921, 204	22, 458, 463
1865-'69 *	5, 031, 287	27, 820, 920
1870	1, 641, 477	5, 914, 112
1871	1, 541, 281	4, 537, 530
1872	1, 067, 488	7, 099, 656
1873	1, 502, 206	7, 016, 767
1874 †	937, 685	6, 213, 377
1875	786, 231	4, 252, 950
1876	791, 701	4, 997, 278
1877	631, 002	6, 596, 338
1878	639, 304	11, 013, 440

* Five years period.

† Sacks and barrels reduced to bushels.

‡ Period at which trade became sensibly affected by railroads from the West tapping interior points.

Question 13. Please to present a table showing the quantity of flour and grain shipped from New Orleans to ports in the United States and to foreign ports during years 1850 to 1878, inclusive.

Answer. See following table:

Quantity of flour and grain shipped from New Orleans to ports of the United States and to foreign ports during the last twenty-nine years.

Years.	To ports of the United States.		To foreign ports.	
	Flour.	Grain.	Flour.	Grain.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Barrels.</i>	<i>Bushels.</i>
1850—5 years	1, 274, 185	5, 116, 615	1, 420, 078	4, 488, 790
1855—5 years	2, 270, 851	8, 385, 907	1, 567, 500	6, 471, 902
1860—5 years	314, 921	1, 399, 420	133, 435	337, 780
1865—5 years	1, 221, 018	4, 435, 817	873, 217	1, 245, 398
1870 *	327, 444	923, 774	228, 279	168, 746
1871 *	356, 020	753, 544	157, 927	594, 091
1872 *	406, 687	1, 375, 747	78, 893	781, 416
1873 *	416, 906	2, 597, 865	68, 867	1, 119, 079
1874 *	299, 279	1, 757, 440	180, 354	1, 244, 498
1875 *	247, 376	1, 160, 800	94, 876	2, 452, 980
1876 *	237, 238	1, 053, 009	83, 792	1, 673, 492
1877 *	171, 062	1, 048, 630	34, 208	2, 930, 192
1878	144, 534	1, 217, 767	38, 042	17, 394, 456

* Includes wheat and corn. No data for wheat for other years.

† Includes 6,034,634 bushels of corn, 838,088 bushels of wheat, and 521,716 bushels of rye.

Question 14. Please to present a statement showing the sections and countries to which cotton was shipped from the cotton States during years 1876-'77 and 1877-'78.

Answer:

Liverpool, Cork, Falmouth, Cowes, Queenstown, Fleetwood.	Great Britain.
Havre, Rouen, Bordeaux, Marseilles, Dunkirk, Nantes, Cette.	France.
Bremen and Hamburg	Germany.
Antwerp and Ghent	Belgium.
Amsterdam, Rotterdam	Holland.
Revel and Cronstadt	Russia.
Stockholm and Gothenburg	Sweden.
Barcelona, Malaga, Santauder, and Gibraltar	Spain.
Genoa	Italy.
Trieste	Austria.
British North America	British North America
Vera Cruz	Mexico.
West Indies	West Indies.
Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey, Delaware, Ohio, Indiana, Illinois	United States.

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These comprise the leading points and sections. Comparatively trifling quantities are shipped to minor ports in the foreign countries enumerated, and occasional lots to other States of the United States, but none of sufficient consequence to note.

Annex d table, compiled from the National Cotton Exchange records, is of interest in this connection.

Exports of cotton from the United States for year 1877-'78, with comparatives for 1876-'77.

Ports.	Great Britain.	France.	Continent.*	Channel.	Total 1876-'77.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
New Orleans.....	743, 131	325, 406	305, 223	79, 336	1, 453, 096
Galveston.....	173, 481	20, 971	12, 038	12, 684	225, 174
Mobile.....	191, 641	26, 146	36, 308		164, 093
Savannah.....	162, 059	35, 083	140, 017	13, 180	351, 239
Charleston.....	115, 619	68, 530	103, 584	9, 528	207, 261
Wilmington.....	28, 984		22, 437	4, 175	55, 596
Norfolk.....	157, 153	2, 204			159, 357
Baltimore.....	41, 498		16, 819		58, 287
New York.....	351, 580	10, 493	52, 455	4, 660	419, 188
Boston.....	122, 549		550		123, 099
Philadelphia.....	24, 999	302	630		25, 931
Port Royal.....	8, 612				8, 612
Other ports.....	15, 009				15, 009
Total 1877-'78.....	2, 047, 185	495, 135	*600, 059	123, 563	3, 355, 492
Total 1876-'77.....	1, 994, 418	461, 088	446, 138	126, 492	3, 028, 136

* Included in continent are 9,030 bales to Mexico.

Question 15. Please to furnish data for the years 1876, '77, and '78 necessary to continue tables on pages 182 and 183 of Appendix to Internal Commerce.

Answer. I append full table.

Number of bales of cotton received at Galveston by river and by rail, during the last five years.

Years.	By river.	By rail.	Total.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1874.....	133, 374	234, 424	367, 798
1875.....	165, 956	194, 938	360, 894
1876.....	203, 606	266, 125	469, 731
1877.....	216, 463	278, 774	495, 237
1878.....	254, 710	201, 521	456, 231

Number of bales of cotton received at Mobile by river and by rail, during years below mentioned.

SUMMARY.

Years.	By river.	By rail.	Years.	By river.	By rail.
	<i>Bales.</i>	<i>Bales.</i>		<i>Bales.</i>	<i>Bales.</i>
1855.....	436, 343	None.	1871.....	177, 512	223, 081
1860.....	575, 555	227, 706	1872.....	90, 251	195, 717
1865.....			1873.....	76, 436	153, 688
1866.....	282, 633	130, 554	1874.....	76, 006	219, 978
1867.....	136, 334	94, 195	1875.....	97, 077	222, 186
1868.....	187, 092	166, 211	1876.....	144, 263	227, 035
1869.....	115, 158	111, 568	1877.....	101, 411	256, 468
1870.....	147, 881	155, 927	1878.....	162, 919	251, 403

Total of all-rail movement to Northern sea-ports and to Northern mills direct.

Years.	Number of bales of cotton shipped by rail.		Total movement by rail.
	To Northern sea-ports.	To Northern mills direct.	
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1855	7, 284	None.	7, 284
1860	108, 676	None.	108, 676
1865*			
1866	211, 885	None.	211, 885
1867	185, 712	None.	185, 712
1868	204, 337	170, 253	374, 590
1869			321, 891
1870	196, 591	153, 825	350, 416
1871	336, 996	228, 923	565, 919
1872	220, 121	122, 065	342, 186
1873	260, 796	141, 500	402, 296
1874	259, 511	237, 572	497, 083
1875	252, 616	191, 604	444, 220
1876	390, 295	305, 327	695, 622
1877	314, 806	312, 789	627, 595
1878	384, 927	295, 306	680, 233

* No record.

Number of bales of cotton received at Northern factories by rail direct, and through Northern sea-ports, during the last twenty-two years.

Year ending September 1—	Received at Northern mills.		Total.
	By rail direct.*	Through Northern sea-ports.	
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1855	None.	571, 117	571, 117
1860	None.	796, 521	796, 521
1865†			
1866		604, 085	604, 085
1867		697, 367	697, 367
1868	170, 523	629, 294	799, 817
1869	259, 611	563, 313	823, 924
1870	153, 825	623, 516	777, 341
1871	228, 923	843, 502	1, 072, 425
1872	122, 065	855, 475	977, 540
1873	145, 500	921, 965	1, 067, 465
1874	237, 572	939, 845	1, 177, 417
1875	191, 604	879, 256	1, 070, 860
1876	305, 327	915, 228	1, 220, 555
1877	312, 789	989, 027	1, 301, 816
1878	295, 306	1, 049, 347	1, 344, 653

* Rail figures from New York Financial Chronicle to 1874.

† No record from 1862 to 1865.

‡ From official crop statement, National Cotton Exchange. Totals of New York Shipping List to 1871 inclusive.

Number of bales of cotton shipped from New Orleans to Northern ports, and from New Orleans direct to foreign countries.

Year ending September 1—	Shipped to Northern ports.	Shipped direct to foreign countries.	Total.
	<i>Bales.</i>	<i>Bales.</i>	
1850	213, 843	624, 748	838, 591
1855	202, 317	1, 067, 947	1, 270, 264
1860	208, 637	2, 005, 662	2, 214, 300
1865*			
1866	252, 835	516, 186	769, 021
1867	248, 370	618, 940	867, 316
1868	100, 215	581, 477	681, 692

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Number of bales of cotton shipped from New Orleans to Northern ports, &c.—Continued.

Year ending September 1—	Shipped to Northern ports.	Shipped direct to foreign countries.	Total.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
1869	222,871	619,534	842,405
1870	179,520	1,005,530	1,185,050
1871	238,824	1,302,535	1,541,359
1872	198,477	888,076	1,087,453
1873	229,968	1,177,058	1,400,526
1874	201,079	1,147,314	1,348,393
1875	162,454	995,270	1,157,724
1876	212,375	1,363,005	1,575,380
1877	188,003	1,204,591	1,392,594
1878	244,187	1,453,066	1,697,253

* No record.

Table showing value, and sources of receipts of cotton at New Orleans (exclusive of cotton received from other delivery ports.)

From—	1878.	1877.	1876.	1875.	1874.	1873.
Red River	\$193,800	\$147,554	\$167,410	\$146,435	\$170,852	\$187,743
Onachita River	132,217	73,762	135,441	70,072	102,827	103,679
Arkansas River	37,009	10,721	44,078	22,136	45,936	58,128
Jackson Railroad	333,512	300,418	300,828	243,302	280,436	271,537
Mississippi River and other sources	676,423	640,902	747,806	511,437	621,647	619,297
Total	1,372,960	1,182,357	1,401,563	993,382	1,221,698	1,240,384

Question 16. Please to present statistics of manufactures of cotton in the United States during the three years ending August 31, 1878.

Answer. No detailed statements have been made up of manufactures of States north or east of the Ohio and Mississippi Rivers since 1875. We have, however, data sufficient to show the consumption of the South by States and of the North and West aggregated, ride the following:

Takings of cotton-mills in the United States, for commercial years ending August 31, 1876 and 1877.

	1877-'78.	1876-'77.	1875-'76.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
Alabama	6,091	7,939	10,892
Mississippi	5,653	3,300	3,736
Arkansas	None.	250	320
Kentucky	4,500	3,790	5,188
Louisiana	2,223	680	1,382
Missouri	6,157	4,702	4,696
Tennessee	14,541	14,908	12,643
Texas	822	900	1,179
Georgia	42,566	37,700	44,112
South Carolina	27,918	26,020	26,309
North Carolina	21,840	15,000	14,155
Virginia	15,736	12,000	11,025
Taken by Southern spinners	147,747	127,189	133,637
Taken by Northern spinners	1,344,653	1,301,816	1,220,555
Total United States consumption	1,492,400	1,429,005	1,354,192

Question 17. Is the shipment of grain from New Orleans to Europe limited by the amount of available ocean tonnage which may be received at New Orleans in the course of trade, or are such shipments confined principally to the completion of the loading of vessels which cannot be fully loaded with cotton, or, in other words, is grain taken by vessels arriving at New Orleans merely for the reason that they are unable to secure better paying freight?

Answer. The extent of our grain business for twelve months ending August 31, 1878, as shown in answer to question No. 14, is a sufficient reply to the above. The business is regular, and whole or part cargoes of grain are engaged, as in case of cotton or other merchandise. Cargoes part cotton and part grain have up to a recent period been preferred by shipmasters, for the reasons set forth in reply to question No. 3. There is practically no limit to the supply of available tonnage, as by use of the telegraph ship-owners all over the world keep themselves thoroughly posted as to freight offerings and the probabilities, and, hence, are always ready to dispatch their vessels to this or any other port where they have reasonable assurance of a cargo at fair rates.

The prospects of the cotton crop and consequent probability of heavy receipts of cotton at New Orleans this year brought a large fleet of vessels here early in the season; these were followed by others from time to time, and at no period during the year was there a scarcity of freight room.

Arrangements are in progress for additional lines of steamers to ply between New Orleans and points in Europe during next season; and we shall have an abundance of both steam and sail freight room for the accommodation of the increased business in cotton, grain, and other articles that is confidently looked for.

Question 18. Please to present any facts not given by you in your reply to other questions as to the probable development of a large foreign grain trade in New Orleans?

Answer. Since the revival in the grain trade of New Orleans, experience has demonstrated that grain from the West can be placed on board of an ocean carrier in this port at extraordinarily low prices. It has already been done at a cost of 5 to 5½ cents, and, as stated in reply to question No. 7, with present facilities and competition, it is in calculation that decidedly lower rates will be reached.

It is proper to remark, in justification of a proposition so purely argumentative as the above, that the merchants of New Orleans and of the West rely upon the cheapness of their inland transportation, present and prospective, as an irresistible means for controlling a goodly share of the grain trade of the West, except the extreme Northwestern sections.

During the season of 1877-'78 and most of 1878-'79, there was an abundance of tonnage in the port of New Orleans (in fact, for a time the number of ocean vessels loading here was nearly as large as at New York), and no difficulty need be apprehended on that score in the future.

The mode of transporting grain to New Orleans is remarkable, and from the enormous quantities that can be handled at one time, effectually does away with the supposed difference in time in favor of railroads as compared with the Mississippi River.

Single towboats bring barges at one time from Saint Louis to New Orleans with from 150,000 to 180,000 bushels of grain in addition to other articles, the time between the two places ranging from seven to nine days. To move, say, 150,000 bushels by railroad would require about 420 cars of 20,000 pounds capacity, to say nothing of the time, labor, and expense in loading each car and subsequent transfers, most of which are saved in transportation by barges on the Mississippi River route, the barges being towed to the ship's side, and the grain transferred by means of floating elevators, without any intermediate handling, direct to the ship's hold.

These are important considerations and are likely, of themselves, to have great weight in finally determining this question.

Question 19. Do statistics and other facts bearing upon the cotton movement of 1878 indicate any increase or decrease in the overland or all-rail movement?

Answer. The following table, showing crops and all-rail movement for past five years, best answers this question:

Crops and all-rail movement from 1873 to 1878, inclusive.

Years.	All-rail movement to Eastern delivery ports and mills.	Total cotton crops United States.	Per cent. of crop movement, all rail
	<i>Bales.</i>	<i>Bales.</i>	
1872-'73.....	402, 296	3, 930, 508	.1023 +
1873-'74.....	497, 083	4, 170, 388	.1191 -
1874-'75.....	444, 220	3, 827, 845	.1160 +
1875-'76.....	695, 622	4, 632, 313	.1501 -
1876-'77.....	627, 595	4, 474, 089	.1402 +
1877-'78.....	680, 233	4, 773, 865	.1425

It is more than probable that the all-rail movement for the commercial year ending August 31, 1879, will exceed 16 per cent. of the entire crop. The official statement of

the National Cotton Exchange for the nine months ending May 31, 1879, shows that the railroads crossing the Ohio and Mississippi Rivers have handled 805,695 bales direct from producers (against 579,956 for the same period in 1877-'78), the largest rail-movement on record, and considerably exceeding any period of twelve months in the annals of the trade. Many interior places have erected improved steam-compresses, thereby increasing the carrying capacity per car, and cutting rates to figures which have enabled the liveliest competition with water routes to the Southern seaboard. A part of the increase in the rail movement, however, must be ascribed to diversion from New Orleans during the epidemic in 1878, her loss from that cause having been fully 100,000 bales.

Cotton movement and crops of the United States for years 1877-'78 and 1876-'77, compiled from records of National Cotton Exchange of America.

GENERAL MOVEMENT TO THE SEABOARD.

	1877-'78.		1876-'77.	
	Bales.	Bales.	Bales.	Bales.
Net receipts at New Orleans		1,391,519		1,190,386
Net receipts at Galveston	454,137		486,132	
Net receipts at Indianola	6,901		13,086	
Net receipts at Corpus Christi			301	
Net receipts at Brazos de Santiago	23			
Net receipts at Brownsville	38			
Net receipts at Eagle Pass	747	461,846	1,307	500,886
Net receipts at Mobile		418,632		380,918
Net receipts at Charleston	422,453		440,362	
Net receipts at Port Royal	18,541		26,820	
Net receipts at Beaufort, Hilton Head, and Georgetown	1,892	442,886	5,929	473,111
Net receipts at Savannah	563,635		458,093	
Net receipts at Brunswick	8,082	571,117	9,436	468,420
Net receipts at Wilmington	123,422		113,348	
Shipped from other points on coast of North Carolina to Baltimore and Northern ports	14,627	138,049	25,317	138,065
Net receipts at Norfolk	425,714		505,982	
Net receipts at other shipping points in Virginia	84,867	510,581	74,246	580,178
Net receipts at Florida ports and shipments from interior of Florida to Savannah by rail		58,288		41,132
* Received at New York, rail overland	144,250		120,985	
* Received at Boston, rail overland	133,528		108,790	
* Received at Philadelphia, rail overland	32,365		32,323	
* Received at Baltimore, rail overland	14,435		4,741	
* Received at Providence, rail overland	9,955		14,238	
* Received at Portland direct, according to railroad statements	6,739	341,272	301	281,378
Total		4,334,190		4,035,083

* Direct from producing sections.

OVERLAND MOVEMENT.

	1877-'78.		1876-'77.	
	Bales.	Bales.	Bales.	Bales.
Carried north—				
from Saint Louis		248,313		204,227
across Mississippi River at Hannibal		22,065		36,807
from Cairo, via Cairo and Vincennes Railroad		87,682		69,484
via Illinois Central Railroad		11,894		48,898
from Evansville, via Evansville and Terre Haute Railroad		19,653		12,385
from Louisville, via Ohio and Mississippi Railroad		36,890		47,222
via Jefferson, Madison and Indianapolis Railroad		134,080		120,835
via Cincinnati and Lexington Railroad		44,672		34,606



Cotton movement and crops of the United, &c.—Continued.

OVERLAND MOVEMENT—Continued.

	1877-'78.			1876-'77.		
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
Receipts at Cincinnati by river		70,819			46,099	
Shipped to mills adjacent to river and to points above without touch- ing at Cincinnati, exclusive of cot- ton to Mayesville, counted in South ern consumption		11,693			12,610	
		689,261			633,173	
Less shipments:						
From Saint Louis to Louisville, counted at both places	772			600		
From Saint Louis to Vicksburg	1,389					
New Orleans	6,575			4,328		
Cairo to Saint Louis	292	9,028		650	5,578	
Total overland movement			680,233			627,565
Receipts overland at New York, Boston, Philadelphia, Providence, Baltimore, and Portland		341,272			281,378	
Shipments from Mobile and other outports by rail and river to in- terior	248,986			133,610		
Less deducted at—						
New Orleans	178,511			88,096		
Savannah	25,844			10,624		
Charleston	956					
Mobile	20			862		
	205,331	43,655		100,182	33,428	
Deduct			384,927			314,806
Direct overland movement from producers to mills north and east of the Ohio and Mississippi Rivers			295,306			312,789

We thus have:

	1877-'78.	1876-'77.
Receipts of cotton at United States shipping ports	<i>Bales.</i> 4,334,190	<i>Bales.</i> 4,035,093
Shipments, all-rail, from producers direct to manufacturers	295,306	312,789
Adding consumption by mills in cotton States, not included in port receipts, gives	4,629,496	4,347,872
	144,369	126,197
Total crop in bales	4,773,865	4,474,069

Question 20. Of the total amount of wheat-flour and grain received at New Orleans during the year ending April 1, 1878, what proportion was consumed at New Orleans, and what proportion was shipped to other points in the United States, and what proportion was exported to foreign countries?

Answer. For the commercial year ending August 31, 1878, the flour and grain statements, according to the New Orleans Price Current, were as follows:

FLOUR.

	Supply at New Orleans.	Shipped to domestic ports.	Shipped to foreign ports.	Consumed in New Orleans.
Barrels	663,311	144,534	38,043	465,773

The supply at New Orleans for year 1877-'78 included 24,007 barrels stock left over September 1, 1877. The stock on hand September 1, 1878, was 14,962 barrels.

CORN.

	Supply at New Orleans.	Shipped to domestic ports.	Shipped to foreign ports.	Consumed in New Orleans.
Bushels.....	8, 092, 861	1, 210, 774	6, 034, 654	787, 433

The supply at New Orleans for year 1877-'78 included 126,500 bushels stock left over September 1, 1877. The stock on hand September 1, 1878, was 60,000 bushels.

About the same proportions as set forth in above tables, may be applied to flour for the period named in above question. The receipts of wheat and rye are almost exclusively for foreign export. Of oats, nearly all the receipts are for local consumption in New Orleans and the adjacent country.

APPENDIX No. 16.

INFORMATION FURNISHED BY GEORGE U. PORTER, ESQ., SECRETARY OF THE BOARD OF TRADE OF BALTIMORE, IN REGARD TO THE COMMERCIAL AND TRANSPORTATION INTERESTS OF THAT CITY, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS.

Question 1. Please describe the competition which has been going on during the year ended May 31, 1879, between Baltimore and other Atlantic seaports for the grain trade of the Western States. Your answer may embrace the following points:

(a.) How far this competition relates to the transportation of grain for consumption at Baltimore and the other Atlantic seaports, and at points on the Atlantic seaboard supplied from these cities, or from points on the line of the several trunk roads.

(b.) How far this competition relates to the transportation of grain to the seaports for the exportation of grain to foreign countries.

(c.) The rates which have prevailed from Chicago, from Saint Louis and from other interior points to Baltimore and the other Atlantic seaports during the last two years.

(d.) The rates which have prevailed during the year between the several Atlantic seaports of the United States and European ports.

(e.) The kinds of grain and the geographical limits of the products of the West, which naturally seek the port of Baltimore on account of distance or on account of facilities of direct rail transportation from the interior points to Baltimore.

Answer. The competition between the trunk lines for Western grain has had no unfavorable bearing on local consumption. A very small percentage of the Western product, either of wheat or corn, is taken for our local consumption. The local millers depend chiefly for their supplies on near-by receipts from Maryland, Virginia, and Pennsylvania, the higher grades of flour being made of the choicest wheat of Southern growth. The white and yellow corn grown in Maryland and Virginia, contiguous to the Chesapeake Bay, is peculiar to the soil and climate of those States, and for home requirements commands a preference over the Western growth, and usually at better prices. The extent of the Southern crop, marketed at Baltimore for the year 1877, was in round figures 4,500,000 bushels corn, and of wheat, 2,500,000 bushels—together, 7,000,000 bushels; the aggregate of Western wheat and corn received was 22,000,000 bushels, making in all for that year 29,491,810 bushels. For 1878, the Southern crop of both wheat and corn was about the same as for 1877, but there was a large increase in receipts of Western. The growth of the grain business at Baltimore will be seen from the annexed table, showing the receipts each year since 1868.

Receipts of grain for the following years.

	Wheat.	Corn.	Oats.	Rye.	Total
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Total 1878.....	22,017,120	17,907,108	1,052,046	59,631	41,035,905
Total 1877.....	7,331,540	21,212,309	831,182	116,699	29,491,810
Total 1876.....	3,945,247	24,684,230	810,212	112,100	29,551,849
Total 1875.....	4,409,670	9,567,141	977,514	74,529	15,028,854
Total 1874.....	6,389,834	9,355,467	1,139,216	118,548	17,003,065
Total 1873.....	2,810,917	8,330,449	1,255,072	109,519	12,406,957
Total 1872.....	2,456,100	9,045,465	1,959,161	90,938	12,561,064
Total 1871.....	4,070,017	5,735,921	1,833,409	88,956	11,724,303
Total 1870.....	3,039,357	3,831,676	1,243,720	77,778	8,192,531
Total 1869.....	3,249,985	3,923,583	1,171,424	177,246	8,522,238
Total 1868.....	2,293,709	4,177,264	1,146,175	136,270	7,753,506

Before the Western grain trade became so largely developed under the competition of the trunk lines, the local or bay receipts at Baltimore furnished domestic supplies of corn to both Southern and Northern Atlantic ports. This portion of our trade has radically changed. The South for several past years has increased its home production, and the Northern Atlantic ports have drawn their supplies chiefly from the West.

(b.) The competition between the trunk lines for traffic in grain to the seaboard cities, serves to reduce the cost of transportation to the producers and enables their surplus production to find an outlet abroad, by being able to compete with other foreign markets, thus encouraging the growth, trade, and wealth of our entire country, besides securing cheap bread for our own people.

(c.) Under the agreement of the trunk lines, the rates agreed upon April, 1877, were as follows:

Grain, per 100 lbs.		Grain, per 100 lbs.	
From Chicago to Baltimore	27 cents.	From St. Louis to Baltimore	32 cents.
From Chicago to Philadelphia	23 "	From St. Louis to Philadelphia	33 "
From Chicago to New York	30 "	From St. Louis to New York	35 "
From Chicago to Boston	35 "	From St. Louis to Boston	40 "

The above were the published rates, and were continued for some months, though doubtful about being strictly adhered to by either of the companies, as frequent complaints and charges were made, one against the other, of violating the agreement.

In September there was an advance of 5 cents per 100 pounds from Chicago and 6 cents per 100 pounds from Saint Louis, making them as follows:

Grain, per 100 lbs.		Grain, per 100 lbs.	
From Chicago to Baltimore	32 cents.	From St. Louis to Baltimore	38 cents.
From Chicago to Philadelphia	33 "	From St. Louis to Philadelphia	39 "
From Chicago to New York	35 "	From St. Louis to New York	41 "
From Chicago to Boston	40 "	From St. Louis to Boston	46 "

In October there was a re-classification and a still further advance.

Early in September, 1878, rates per rail from Chicago to Eastern cities were advanced and made as follows:

	To New York, 100 pounds.	To Philadel- phia, 100 pounds.	To Baltimore, 100 pounds.	To Boston, 100 pounds.
	Cents.	Cents.	Cents.	Cents.
Fourth class	35	33	32	40
Grain	30	28	27	35
Boxes of meat	35	33	32	40
Bulk meat	40	38	37	45
Barrels of meat	35	33	32	40
Poultry, &c.	70	68	67	70
Cheese	50	48	47	50
Seeds	35	33	32	40

These rates were not long maintained, the "Vanderbilt" roads being charged first with breaking faith. Frequent mutterings of complaint appeared in the New York papers. In December, 1878, it was discovered that through bills of lading were being issued from Chicago to Liverpool, via New York or Boston, at 47½ to 50 cents per 100 pounds for grain; a little later heavy contracts were made of provisions through from Chicago to Liverpool, via steamer from Boston, Portland, and Philadelphia, at 22s. to 22s. 6d. per ton. These low rates were owing to the increased number of steamships, which the several trunk lines of rail had contracted to find business for.

During the first four months of 1879 there were several efforts to brace up rates by the trunk-line managers; but their resolves are not long adhered to, and the present demoralization in freights surpasses all previous experience.

Through average rates of freight from Chicago to Liverpool for the year 1878.

Months.	On wheat and corn, per 100 pounds.			Provisions, per 100 pounds.			
	Via New York.	Via Phila- delphia.	Via Bos- ton.	Via New York.	Via Phila- delphia.	Via Bos- ton.	Via Balti- more.
1878.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
January	68	64	64	81	77½	77½	74½
February	50½	50½	50½	75	70½	70½	68½
March	45½	46	46	54	52½	52½	48½
April	50½	46½	46½	50½	49½	50½	52
May	48	42½	42½	53½	45	45½	60
June	48	41.60	41.60	49½	47½	48	.....
July	44½	39½	40	53½	44½	44½	.....
August	51	39½	38½	69	62	62	.....
September	53	49½	51	74½	67½	67½	65
October	57½	56½	56½	82½	74½	74½	67
November	57	57	56½	84½	75½	75½	69½
December	49½	48½	49½	63½	60	55	52½

During the winter and early spring months the rates were rapidly dropped under the cutting process participated in by all the roads, falling on grain from Chicago to Baltimore to 20 cents per 100 pounds, with a good deal of the business being done at 17 cents, and in special cases as low as 15 cents per 100. Since then, however, there have been other agreements made by the managers of the trunk lines, and raising the rates to 27 cents from Chicago to Baltimore.

(d.) Replied to under No. 6.

(e.) Wheat, corn, and oats, the product of the Middle States, and also of the South-western and Northwestern sections of our country, naturally seek Baltimore, the nearest seaboard market, quickened by the usually cheaper cost of transportation and the unsurpassed terminal facilities of our railroads.

Question 2. Please to present facts showing historically the growth of steam navigation between Baltimore and ports of Europe, stating when each line was formed, its nationality, and the number of vessels employed by each line. Please also to state to what extent the Baltimore and Ohio Railroad is identified with ocean-steamer lines between Baltimore and Europe, and what special favors or accommodations are now granted to such steamer lines.

Answer. The first effort to establish a line of steamers between Baltimore and Liverpool was made by the Baltimore and Ohio Railroad Company in 1866. Three propeller steamers, which had been in the coasting trade, were purchased and put on the line, and monthly trips from each port were kept up until the fall of 1868. The vessels, named the Worcester, Somerset, and Carroll, proved not suited to the trade. They had very limited carrying capacity, either for cargo or passengers; besides, were slow in speed and large consumers of coal. Every trip netted a loss to the company, and the enterprise wound up, after sale of the ships, with cost to the company of more than half a million dollars. This money, however, was not regarded as entirely lost; and though it may be termed dearly-bought experience, it nevertheless developed the practicability of maintaining ocean steam transportation between the respective ports, when more suitable vessels could be obtained. More than this, it led directly to the establishing of the North German Lloyd Line between Baltimore and Bremen, via Southampton. This company commenced with two new steamers, Baltimore and Berlin, in the spring of 1868, by making monthly trips from each port. In the spring of 1869 two more new steamers, Ohio and Leipzig, were added to the line, and the trips increased to semi-monthly from each port. In 1873 two other new ships, the Braunschweig and Nürnberg, were added, and for a time weekly trips were maintained; but subsequently, with the falling off of the emigrant business, the weekly trips to our port were abandoned, though frequently from the accumulation of freight here, extra vessels of the line find business for forwarding it. The Baltimore and Ohio Railroad Company were part owners in the first two, or probably four, of these steamers. They had stock to the amount of \$750,000, and entered into an arrangement with the North German Lloyd for a specified term of years. Free pierage-room at Locust Point is furnished the line, and the coal consumed by the steamers at net cost to the railroad company.* This line has been running uninterruptedly and successfully since the date of its inauguration, under the very excellent management of Messrs. A. Schumacher & Co., agents.

After the withdrawal of the railroad company's line of steamers between this port and Liverpool, in the fall of 1868, as before referred to, a period of two and a half years elapsed before there was a resumption of any regular steam intercourse. Early in 1871 the Ottawa and Caspian, of the Allan Line (British), arrived with steel rails from Liverpool, for the Baltimore and Ohio Road, and returned hence to that port with full cargoes of produce. Other steamers of the same line followed, and from that period this line has been running regularly between the two ports, making semi-monthly trips; the agents here of the line being Messrs. A. S. Schumacher & Co.

In December, 1875, the Beaver Line; also British, put on several steamers to run between this port and Liverpool, and continued to make trips with some regularity until February, 1878, when, by an arrangement with the Grand Trunk Railroad, they were withdrawn to run between Portland, Me., and Liverpool. Both these lines were furnished by the Baltimore and Ohio Railroad Company with free pierage at Locust Point.

Independently of the regular lines of steamers plying to European ports from Baltimore, the great concentration of grain, flour, cotton, tobacco, &c., through our railroad and water communication, has induced, the past year, many transient steamers, *all foreign*, to arrive in quest of business, so that the arrival and departure of ocean steamships is almost of daily occurrence. At this writing there are eleven foreign ocean steamers in port, and all with cargoes engaged.

Since the inauguration of the first line of steamers by the Baltimore and Ohio Railroad Company, the foreign export trade of our port has increased fourfold. The wisdom of the movement is thus shown.

* Coal is no longer furnished through the railroad company. The arrangement was abrogated some years ago, and since then the coal required by the steamers is purchased by their agents in the open market.

Question 3. Please to describe, in general terms, the facilities for the direct transfer of grain from cars to sea-going vessels at Baltimore, mentioning the capacity of the elevators, the ownership and control of the facilities afforded by them for direct transfer of grain from cars to vessels, and stating also whether grain is usually spouted from the elevator into ocean steamers, or transferred to them by means of floating elevators.

Answer. The Baltimore and Ohio Railroad Company have two elevators at Locust Point, west side of the harbor, with storage capacity for 2,000,000 bushels, and the Northern Central Railroad Company, at Canton, on the north side of the harbor, has two more with capacity for storing 1,350,000, making for the port an aggregate of storage capacity of 3,350,000 bushels. These elevators are owned by the respective roads. Those of the Baltimore and Ohio Company are worked by that company. The Northern Central Road has leased its elevators to a company styled the Baltimore Elevator Company, which is managed by Messrs. J. M. Pau & Son. There is besides at Canton a small transfer elevator, owned, I believe, by the Canton Company, but it has very little storage capacity. There is also a floating elevator in the harbor, owned, I believe, by J. N. Gardner, which is used for transferring grain from bay vessels into barges, and from barges into ocean vessels, &c. All the grain inspected, in cars, passes through the railroad elevators, and is thence spouted into ocean steamers, or bagged when required. The floating elevator is only required to transfer other than rail receipts.

Question 4. How does the aggregate tonnage of ocean freights from Europe to Baltimore compare with the aggregate tonnage of ocean freights from Baltimore to Europe?

Answer. The aggregate tonnage of ocean freights from Europe to Baltimore, as compared with the aggregate of ocean freights from Baltimore to Europe, is not more than *one-fifth*; that is, five tons of freight are shipped hence to Europe for one received. This is an estimate which, I think, on closer examination would prove nearly correct for the year under consideration. The steam tonnage, as a general thing, arrives but partially loaded; a few sailing-vessels bring cargoes of salt and chemicals, and a limited number bring fruit and brimstone from the Mediterranean, whilst 80 per cent. of the whole tonnage comes in ballast. Many of the sailing-vessels are from ports in the United Kingdom, where they have nothing to ship.

Question 5. What have been the relative ocean-steamer rates from Boston, New York, Philadelphia, and Baltimore, respectively, to Liverpool during the past year, ending June 1, 1878?

Answer. See following table:

Rates of freight from Baltimore to Liverpool on grain in ship's bags per steamers, and on grain in bulk per sailing-vessels to Cork for orders, on the first of each month for the year ending June 1, 1878:

Months.	Steamers to Liverpool, per bushel.	Sailing vessels to Cork for orders, per quarter.
1877.		
July 1.....	d. d.	s. d. s. d.
August 1.....	4 to 4½	4 0 to 4 6
September 1.....	7 to 7½	6 3
October 1.....	11	7 0 to 7 3
November 1.....	9 to 9½	7 0
December 1.....	10½	7 0
	9½	6 3
1878.		
January 1.....	11½	6 4½
February 1.....	11	5 9
March 1.....	10½ to 11	5 9
April 1.....	9	6 0 to 6 3
May 1.....	9	6 3
June 1.....	8	6 3 to 6 6
July 1.....	9	6 3
August 1.....	8	5 10½
September 1.....	7½	6 3
October 1.....	6½	5 0 to 5 3
November 1.....	8½	5 9
December 1.....	8½	5 9 to 6 0
1879.		
January 1.....	6½	5 4 to 5 6
February 1.....	7½	5 3 to 5 6
March 1.....	7	5 3 to 5 6
April 1.....	6½	5 1½
May 1.....	6 to 6½	5 3
June 1.....	5 to 5½	4 9

* Since June 1 engagements have been made at 4d. per bushel, and charters at 4s. 6d. per quarter.

It is shown by the above that freights for the year took a very wide range. The rates are influenced by the amount of business offering and the available supply of freight room, together with the current rates prevailing at other Atlantic ports. If room is offered at more satisfactory rates at Philadelphia or New York, the orders of shippers here are necessarily limited.

Rates of freight from New York on grain to Liverpool per steamers, and on grain in bulk per sail to Cork for orders, on the first of each month for year ending June 1, 1878.

Months.	Steamers to Liverpool, per bushel.	Sailing-vessels to Cork for orders, per quarter.
1877.		
July 1	d. d. 4½ to 5	s. d. s. d. 4 3 to 4 6
August 1	6 to 7	5 9 to 6 0
September 1	10 to 10½	7 0 to 7 3
October 1	8½ to 9	7 0 to 7 3
November 1	8½ to 9	6 6 to 7 0
December 1	7½ to 8	6 0 to 6 3
1878.		
January 1	9	6 6
February 1	9½ to 10	5 9
March 1	8	5 6
April 1	6½ to 7	6 9
May 1	8	6 3
June 1	8 to 8½	5 10½

I have not the data at hand to make the comparison, but whatever difference may be, depends altogether on local causes, influencing the supply and demand.

Question 6. What have been the relative ocean steamer rates from Liverpool to Boston, New York, Philadelphia, and Baltimore, respectively, during the year ending June 1, 1878?

Answer. The comparatively limited amount of business from Europe to the Atlantic ports, considering the vast number of steamships competing for it, makes rates rule low to all the ports, and would doubtless be taken as cheaply to one as another.

Question 7. How does the tonnage from Baltimore to Boston on the steamer lines compare with the amount of tonnage from Boston to Baltimore? Please also to state similar facts with respect to the steamer lines to New York and Philadelphia. As it would probably involve a great deal of labor to work this out, it is presumed that the agents of the several lines will be able to give the information approximately without any special calculation.

Answer. The tonnage from Baltimore to Boston per steamers is heaviest; freight is carried both from and for the Baltimore and Ohio Road by this steamship line. This line also takes a great deal of cotton and garden-truck from Norfolk, Va., en route for Boston. The inland lines of steamers to Philadelphia and New York also depart heavier loaded than they arrive.

Question 8. Has any combination been made at Baltimore (as is the case at other cities) under which through rates have been made between cities at the West and ports in Europe via the Baltimore and Ohio Railroad and ocean steamer lines, which through rates are less than the current rail and ocean rates combined, in case of shipment to Baltimore, and thence to destination?

In replying to this question please to speak of discriminations with respect to east-bound traffic or the direct exportation of produce from interior points and of discriminations with respect to west-bound traffic or direct importation at interior points.

Answer. This is a question rather difficult of solution, except by those directly interested. Through rates are made from western points to ports in Europe via steamers from Baltimore, chiefly on lard and other provisions from Chicago. If there is any discrimination against our city in these through rates, no complaints have ever reached my hearing. I have, however, heard complaints of direct importations from Europe via Baltimore for interior points of articles which our importers had previously been able to supply, but which the relative higher rate of rail-freight required of them now prevents. But other lines of steamers to other ports force the steamers bound to Baltimore to make such through rates, or they would be unable to command any business on their inward passage. Since January last, however, there has been very little through business via this port, and the agents of the steamship lines inform me that local freight is preferred, and that no advantage in rates has ever been made on through business that would not have been accorded to local shipments.

Question 9. Do you consider the purchase of grain or any other article of merchandise by the railway company, or by any one of the ocean steamer lines, for the purpose of making up cargoes or with the direct view of participating in the profits of

trade, to be opposed to the commercial interests of Baltimore? Please to present your views as to such participation of the common carrier in trade as you may desire.

Answer. There may be times when a common carrier, such as a steamship line, departing on a fixed day (whether the owner of such line be individuals or a railroad company), would be justified in purchasing to fill up the room; but, in my opinion, these instances should be exceptional, for the promotion of the permanent interest of the line. When it is known to be the custom of owners to make frequent shipments, other shippers lack confidence and may be placed at a disadvantage in the rate of freight paid by them, and the general uncertainty created in their minds cannot be otherwise than detrimental to the line. On the receipt of favorable advices for shipments, it might occur that the owners wished to monopolize all the room, thus shutting out all others from participating. The custom does not obtain at our port. Our railroads have never been known as purchasers or shippers in the relation here referred to, and the agents of the North German Lloyds and Allan Line steamers have never bought a pound of goods for shipment, and the open field thereby presented to the general shipper inspires confidence and aids in the more prompt engagement of cargo. If under such rule of management there were no shippers, then the owners should be excusable for making up the cargo by their own venture.

Question 10. Please to describe as specifically as you may be able the competition existing between Baltimore and New Orleans for the trade of the Western and North-western States, referring to the principal commodities received at and shipped from those two cities and the cities and towns at the West, and the territorial limits at the West within which such competition is exerted.

N. B.—Please to let your remarks refer to territories situated north of the Ohio River and north of the State of Arkansas.

Answer. The large amount of money in recent years appropriated by the government for the improvement of the Mississippi River, by increasing the depth of water in the channel to the port of New Orleans, would, it was apprehended, on its accomplishment, succeed in diverting traffic to that port, which otherwise would find an outlet through northern ports. This was the expectation generally indulged in by the business people of the Southwest, and it awakened fears in the northern cities, as well as in Baltimore, the latter more particularly, from her being the nearest competitor with New Orleans for the traffic centering at Saint Louis. But the experience of the past year has dissipated much of this feeling. The jetties have given more depth of water to that port, but from some cause the grain which was looked for has not flowed in that direction, except to a limited extent. The prevalence of the yellow fever last year for so long a time put an embargo on that city's business, and the rigid system of quarantine now in force for its prevention drives vessels away, and consequently prevents interior shipments of produce to that port. Besides this, and other local disadvantages which increase the cost for handling at that port, the rates of transportation per rail to Baltimore and other eastern ports, have been on the average as low as per river navigation, and thus New Orleans has ceased to be feared as a competitor for the grain business. But in the course of time, with her facilities improved, it would be but reasonable to expect a better condition of things than is at present there experienced.

When at the late session of Congress it was proposed to subsidize steam lines to Brazil, from both New York and New Orleans, Baltimore opposed the scheme with all her might, as between these subsidized ports, she had great reason to fear the loss of her coffee trade.

With open, free, and fair competition, Baltimore possesses the advantage of geographical position, which should enable her not only to receive from but to distribute to all western points merchandise, as cheap as, if not cheaper, in cost of transportation, than any other seaboard city, not excepting New Orleans, and which has been demonstrated repeatedly by importations through her port for Saint Louis and other western cities.

The following figures, taken from the New Orleans Price-Current, show the receipts of grain, &c., at that port, from the 1st of September, 1878, to 31st May, 1879, nine months, and compared with corresponding months ending 31st May, 1878:

	Nine months, 1878-79.	Nine months, 1877-78.
Corn, sacks	706, 584	1, 049, 819
Corn, bushels	3, 511, 252	4, 309, 052
Oats, sacks	344, 349	314, 617
Rye, bushels,	295, 624	549, 688
Wheat, bushels	1, 551, 982	802, 356
Flour, barrels	499, 669	496, 793

EXPORTS TO FOREIGN COUNTRIES COMPARED FOR SAME MONTHS.

	Nine months, 1878-79.	Nine months, 1877-78.
Corn, bushels	3,331,623	5,494,704
Rye, bushels	285,144	441,056
Wheat, bushels	1,413,368	678,499
* Flour, barrels	83,621	27,239

Baltimore has to compete with New Orleans for supplying a portion of the West with Rio coffee; but beyond this and the grain traffic, there is nothing else of importance. The quantity of coffee imported at New Orleans from Rio from 1st September, 1878, to June 7, nine months, was 137,560 bags, against 171,188 bags for corresponding period previous year. Baltimore's imports were 458,645 bags from 1st September, 1878, to June 7, 1879, against 355,625 bags for same period previous year, showing a large gain; while for New Orleans there was a heavy decline. The Louisiana sugar crop is chiefly distributed through the West via New Orleans. The foreign sugar imported at that port is light. Under the present tariff laws none but low grades of foreign sugar can be imported, and such as have to be refined, and as nearly all the refineries are in the eastern cities they supply to a very large extent the western demand which the Louisiana crop fails to meet. Our city has had of late years a very unfortunate experience in refining; all engaged in it broke, and three large refineries are now lying idle, and the business of importing raw sugars at our port is reduced to the minimum. We have left, however, in successful operation, three or four refineries which manufacture sugar (yellow goods) from molasses, which product finds a market in the West and Northwest.

As I have before remarked, Baltimore has little to fear from fair and open competition; but with subsidized steamships, as was proposed by Roach, to run from New York and New Orleans to Brazil, our merchants would have had a very unequal contest in retaining their coffee trade.

* The increase in exports of flour was confined to Cuba.

APPENDIX No. 17.

STATEMENT PREPARED BY MR. GEORGE FRAZEE, SURVEYOR OF CUSTOMS
AT BURLINGTON, IOWA, IN REGARD TO THE CONDITIONS GOVERNING
THE COURSE OF THE COMMERCE OF THE NORTHWESTERN STATES.

CUSTOM-HOUSE, BURLINGTON, IOWA,
August 8, 1879.

JOSEPH NIMMO, Jr., Esq.,
Chief of Bureau of Statistics:

SIR: I herewith inclose the several lists of questions as to places where merchants of this city make their principal purchases, forwarded to me under date of August 1, with the answers made thereto by those to whom they have been submitted.

The departments I have selected represent our heaviest dealers in general merchandise. There are other large dealers in articles of home manufacture, such as leather, saddlery hardware, iron and steel, wagon and carriage material, a very small portion of which is purchased at either Saint Louis, Chicago, or eastern seaports, but almost entirely at the place of manufacture, usually more or less distant from either of the cities you mention. If there were a question as to amount of *west-going* freight to be determined, I incline to the opinion that the dealers here in articles *not* purchased at the points you refer to, pay much the heavier freight-bills.

The course of the trade of this city has undergone a complete revolution within the last twenty-five years. Prior to the advent of railroad communication with Chicago and the East, Saint Louis was the principal market for the purchase of general merchandise, and the Mississippi was the only highway leading to and from it. Some goods were purchased at the East, mostly at Philadelphia, Boston, and Baltimore; some at New Orleans, and some at New York, but the bulk of the purchases, in quantity and value, was made at Saint Louis.

As soon as railroad communication became practicable the course of trade began to be diverted toward the East, and when the rebellion broke out was of necessity fixed in that direction. Chicago at once monopolized such of the trade as would otherwise have gone to Saint Louis, and larger dealers mostly concentrated their purchases at New York. No doubt this result would have been reached in a few years had the war not occurred. But that event precipitated the change, not merely here, but probably at all points along the Mississippi River above the mouth of the Ohio. This sudden change of the direction of trade was, I conceive, an important element in the wonderful growth of Chicago. All the country west poured its products into that city or through it; and whatever that vast territory and population desired to purchase outside its home production was either bought at or passed through Chicago. It would have increased very rapidly, no doubt, in any event. The growth of the country naturally dependent upon it necessarily insured abundant increase in population and prosperity. But the war, with its instant and complete diversion of trade, gave it a wonderful impetus, and sustained it throughout. At the close of the war the direction of trade had become fixed, and Chicago had become the chief mart of the West, a position it is likely to sustain.

What would have been the relative positions of Saint Louis and Chicago had there been no war is not, I think, difficult to determine. In 1870 the population of the two cities was nearly equal. If the war had not intervened, Saint Louis would probably have grown *more* rapidly and Chicago *less*, and the trade of each would have been similarly affected. Saint Louis would have retained a portion of the trade it has lost and Chicago would have had so much less. Commercially, Chicago would have surpassed Saint Louis, owing to its more favorable location and the larger extent of territory and the greater population of which it is the center. But Saint Louis was the wealthier city, and had and has advantages as to manufacturing, especially in iron, which, as they have hitherto under adverse circumstances, will in all probability maintain as great as or a greater population at Saint Louis than Chicago. Saint Louis will never deal in lumber, cattle, grain, and perhaps not in general merchandise as extensively as will Chicago, yet it will always deal largely in these branches of business, and will not, because it cannot, cease to improve its own peculiar advantages. And as these advantages tend more to the increase of population than mere

commerce, I have no difficulty in assuming that, if the times had not been disquieted Saint Louis would now have been much more populous than Chicago, and that, if peace continues and prosperity comes again, Saint Louis will become much the larger city of the two. It is not probable that Saint Louis will ever regain much of the trade from points like this, to which Chicago is most convenient, but it will hold what is naturally dependent upon it, and its southern and southwestern trade will always continue to increase with the increasing population and renewed prosperity of those regions.

More important still to the people of this central region, than the change in the direction of trade produced by the increase and extension of railroads, is the more directly interesting fact that they have reduced the prices of all commodities to a minimum. Facility and quickness of transportation have directly tended to reduce prices but indirectly much more.

Formerly the dealer was under the necessity of purchasing as many goods as he supposed he could dispose of in six months. In the winter the river was closed by the ice. In summer, for the greater part, it was apt to be too low for easy navigation. The spring and fall were the only seasons in which he could rely upon a reasonably certain transportation of his goods at a not excessive cost. Besides, such dealers as purchased in the East, were compelled to make long and tedious journeys at the expense of much time and money, and their goods were a long time in transit at heavy charges for freight, even when freights were lowest. Those who bought in western cities, paid the jobber there for doing what the purchaser in the East did for himself, and a profit in addition. And when the retailer at last received his goods, he was compelled as a rule to sell upon credit more or less extended, and dependent usually upon the result of current or future crops.

Under all these burdens of actual expense and necessary uncertainty, it followed inevitably that the consumer was required to pay a price for everything he purchased calculated to cover all contingencies. Prices of all commodities brought from a distance were *high*, while the products of home industry were exceedingly *low*; and they were low because during half the year they could not be transported to any market, and all markets were so distant, and to be reached only by such circuitous and expensive routes, that the most favorable results could bring but a small return to the producer. Railroads have changed all this to the lasting advantage of all our communities, and without railroads the change could never have been made. The Upper Mississippi Valley owes its population, its prosperity and great and increasing wealth entirely to the fact that railroads have supplied it with constant, certain, and comparatively cheap means for transportation. They bring all commodities almost to every man's door, generally at a small cost. But, what is yet more essential, they afford transportation for the immense quantities of grain, cattle, and provisions, which without this agency would be absolutely worthless. The abundant products of our lands could not assist in supplying the necessities of the East and of Europe, had it not fortunately happened that railroads seem to have developed simultaneously with the progress of migration, and that they afforded a means of almost annihilating both time and distance.

We have gained in both ways. We buy all commodities in this region now as cheap as the Eastern consumer, instead of paying, as formerly, an enormous addition as expense and profit. What we produce and wish to sell we are obtaining a fair price for—a price that compensates the farmer in Iowa, Minnesota, Nebraska, or Kansas better and makes him more prosperous than the farmers of New England and the Middle States are now or ever were. Our soil is rich, it is easily cultivated; good crops are the rule, and the prices at which they can be sold at home are an ample compensation for all the labor and expense bestowed upon them. It is true that there are sometimes unfavorable seasons in some localities—it is too wet or it is too dry—and a short crop results, but not so much because of the season as from the fact that Western farmers rely too much upon the beneficence of Providence and too little upon their own prudence, skill, and labor, and particularly *labor*. If a farmer is too indolent to provide against the contingencies of the weather by means within his ability, I am not sure that he merits much sympathy when his crops make emphatic report of his neglect. The Iowa farmer who attends to his business, is industrious, and possesses ordinary good health and intelligence is always prosperous. I have known many who have become rich. I have known of no instance of failure but where the cause was patent to all acquaintances if not to himself.

I conclude, then, that the wealth, population, and exceedingly rapid growth of the now great States west of the Mississippi are mainly owing to the happy invention of railroads just in season to provide practicable means of transportation for the millions of people who are now happily situated upon their fruitful fields. That these railroads are not always managed upon as equitable principles as they should be; that they have frequently cost too much; that some localities suffer from unjust discriminations, and that freights are sometimes deemed extortionate; that "jobbery" in building and managing railroads is loudly complained of—all these evils being admitted—

it still remains true, and these mutterings against their management are convincing proof of the truth, that railroads have been the prominent and most potent agency in the building of these young empires of the Northwest.

If any one imagines that any portion of the people in this growing region are the enemies of railroads, he is greatly mistaken. The truth is precisely the opposite. The prevailing "mania" is for the construction of *more* railroads. So universal is the craving, that no farmer seems likely to be satisfied unless he can hear a steam-whistle from his door-sill. There is opposition to inequitable management, to extortionate charges, to injurious discriminations, and other modes of imposition too often practiced by railroad managers. The people are willing to pay not merely a just but a liberal rate of freight for their produce. They are not disposed to higgie at anything that is reasonably fair in charges. They have found out what it is worth to carry a bushel of corn or a car-load of cattle to market, and this, and more than this, if necessary, they expect to pay. What they demand, and what in the end they will have, because they are resolved to have it in despite of all opposition, is an honest and impartial administration of railroad transportation, not for the advantage of the few, but in the interest of all. In what mode this reform will ultimately be consummated I would not venture to predict; but it is sure to be made. It is the supreme of folly to imagine that the teeming population of this great valley, and the coming millions who will within a few years till the yet virgin prairies, are likely to hold their possessions at the mercy or pleasure of railroad directories or speculators. The question of freight here is decisive between prosperity and ruin. And on such a question, with all the people on one side and railroad corporations and capital on the other, there can be no doubt as to which scale will "kick the beam." The "Granger States," as they have been sneeringly styled by railroad capitalists, knew what they wanted, and they did something towards securing it. The next time the burden of exaction becomes unendurable we may safely assume that they will go to the bottom of the evil and provide a thorough and lasting cure.

There seems to be an impression abroad that the deepening of the pass at the mouth of the Mississippi and other proposed improvements of the navigation on that river are likely to produce a change in the *direction* of outgoing freights from the Northwestern States; that when everything is done to facilitate transportation down the river and across the ocean a large proportion of the grain and provisions of this region will find its way to its ultimate market by the water instead of the railway route. There are some grounds for this opinion, but they are merely plausible. *Practically* they are fallacious.

There is no dispute about the fact that water carriage is cheaper, and will always be cheaper, than rail. There is no doubt that grain can be transported from Saint Paul to New Orleans at a less cost than to New York even with existing facilities, and I have no doubt that if the trade in that direction were much greater than it now is, the river freights would be still more favorable. Assuming that grain could be carried from New Orleans to Liverpool or other English ports as cheaply as from New York, it would *seem* to follow that all the products of this region must inevitably take the river route to market.

If we examine the matter more closely, I apprehend that we shall find good reason to doubt this conclusion, and perhaps find it altogether practically groundless. There are several factors affecting the water or river route which are generally entirely ignored by its advocates, but which the producer finds it necessary to consider very carefully. There is the fact that he must pay heavy insurance. He can only transport his produce in summer and fall, to him the most inconvenient seasons and most costly; and he, or his immediate purchaser, has to assume the risk of injury by transportation through a hot and damp climate at the most unsuitable seasons of the year; and he can obtain the full benefit of cheap water carriage only upon the assumption that he resides within a short distance of the Mississippi or Missouri Rivers. If the producer would reap *all* the benefit of cheap transit, and chances to reside in the most favorable locality for that purpose, he must himself send his produce to market and wait the returns. If he sells at home, the purchaser takes the same risks and assumes all the charges, and of course pays only such price as will leave a margin for anticipated profit; And as the market is distant and its future condition always uncertain, the margin demanded by the purchaser is always proportionately great. These elements of expense, risk, and uncertainty are so great, that the purchaser in the home markets for the southern or river route would not be able or feel justified to offer a higher price for produce than the dealer who intended to forward by rail. As a matter of fact, I do not suppose any business man would ever buy grain in Iowa to forward by river to Liverpool direct, relying upon his returns from that market. If there were a market for all grain in New Orleans always reliable, or which could be anticipated long enough to cover the time required to reach it, he might occasionally make a venture in that direction and make it profitable; but Liverpool is too distant the time required to reach it too long, and the intervening risks too great for any direct commerce by this route from this region.

But these elements of cost and risk are not all nor even the most powerful in influencing the direction of outgoing produce. The major part of Western produce is consumed in the Atlantic States, and must take that direction in any event. It is only the surplus, after the needs of these Eastern States are fully supplied, that goes abroad, and this surplus is a not very great percentage of the amount forwarded. From the capes of the Delaware northward to the utmost boundaries of Maine there is scarcely a town of any size to which grain or produce of some kind is not forwarded direct by rail from the West. It is loaded in the car at the station nearest the farmer's fields, and goes through in the same car to the very door of the consumer. Wheat and flour from Minnesota, and the same produce, with the addition of corn, oats, and perhaps beef, pork, and lard, from Iowa, Nebraska, and Kansas, are in this manner forwarded direct from the Western farmer to the Eastern consumer at the minimum of charges for freight and profits to middlemen, and the quantities thus forwarded, and which appear in no statistical tables other than railroad freight-books, are immense. The produce of pretty much all the swine, all the cured beef, and all live cattle from the States mentioned, and from Texas, Colorado, and the Territories, are forwarded East by rail exclusively, and must continue to be. The produce of the Northwest goes directly East because it is wanted there, and because the cheapest transportation to the destination of the greater portion of it is by rail, or by rail, lakes, and canal.

Even with the surplus grain shipped abroad, the route directly East will always be the better one. The rivers of the West, north of the Ohio, with the exception of the two great arteries, the Mississippi and the Missouri, are navigable only to a very slight extent. Probably over nineteen-twentieths of the farmers west of the Mississippi reside so far from any navigable waters, that, without railroads, the whole price obtainable for any description of grain would be insufficient to pay the cost of delivery at the nearest point from which it could be forwarded to market by water. The result is that the greater portion of the grain sent to market is of necessity forwarded, even to take the route by river, at least a portion of the distance by rail. If it is sent but a short distance by rail, it costs proportionally more than for a greater distance, and it not infrequently happens that freights are less for the greater distance than for the shorter. The reason for this is that there is often competition for the greater distance, and the railroad freight is consequently made reasonable, while for the shorter there is no competition, and the charges are often extortionate. The managers of railroads understand their interests, and are intent upon monopolizing the carrying business of the West, in which they have had signal success. No one need suppose that they will do anything towards aiding traffic by water. Whatever is intended to take the river they charge the utmost they can; what crosses the river and goes to Chicago, or farther east, they will deal with more liberally; the result of their management being that the freights to Chicago, or to principal Eastern cities, from Central and Western Iowa, and even from Nebraska and Kansas, are about the same as, and from some points less than, from points on the river; and freights to the river points are, except at competing stations, almost or quite as great as to Chicago. The result of this management is that but little grain, once upon the cars, stops at the river. It goes direct to Chicago or farther east. And this removes the question of practical freight competition to Chicago, and changes it from exclusively rail against the river to lake and canal, via New York, against river and New Orleans, to Liverpool. As Chicago has become the great grain market of the West, as any quantity can always be disposed of there, as the returns are speedy and the risks nothing, it is evident that small dealers and local purchasers have good reasons to prefer that market to any at present within their reach or any that is likely to be.

The competing point being, as I conceive, practically removed to Chicago, the question then is, will the cost of freight from Chicago by water to Liverpool be greater than by river and ocean from points on the Upper Mississippi? Now, if there is any advantage to be gained by direct shipments to Liverpool, Chicago can reap that benefit. During all the summer, water carriage is open to shippers via the lakes, the Saint Lawrence, and the Atlantic. The venture has been made in one or more instances, and the result has not been so encouraging as to produce frequent repetitions. The distance I should take to be no greater, if so great, from Chicago to Liverpool than from New Orleans, and the navigation no more difficult; yet we find that Chicago prefers forwarding to New York and other seaports by lake, canal, and rail to making shipments direct across the ocean. If Chicago does not find direct shipments to Liverpool profitable, how can New Orleans make a profit with the burden of river freight added?

Freights from New York and neighboring ports are, and are likely to continue, considerably less than they ever can be from ports on the Gulf. Most of the imports of the country are entered at the Atlantic seaports, thus supplying vessels with freights and passengers in both directions. This is an important factor in the shipping of grain and provisions abroad, and just as the construction of the Erie Canal originated the commercial supremacy of New York and diverted trade from Philadelphia, Boston, and other ports to itself, so now the concentration of foreign trade and shipping in a

high degree tends to an equal concentration of all the products of the country intended to be exported. Until New Orleans imports more, and a great deal more, than now, a large proportion of the vessels taking grain will have to go there in ballast for that purpose. If vessels can afford to do that, they can afford still lower freights from New York and can make quicker voyages, either by steam or sail, and thereby always maintain the existing advantage.

The main factor in the direction taken by Western produce seems to be *Eastern consumption*. So large a proportion is required there, that it constitutes our principal market, and nothing goes abroad until that market is amply supplied. The price there, as compared with that abroad, determines absolutely when and in what quantity shipments may be made with profit; in other words, when there is a surplus that may be spared for other countries. If our crops are only sufficient for home demands, the price at New York will always be high enough to retain our produce at home. If the crops are good and the surplus large and foreign demand active, the price at New York is still the test and standard, and that price will always be high enough to keep its market fully supplied. If necessary, freights would be diminished and the difference added to the home price; for vessels would demand return cargoes, and as they became difficult to obtain would reduce the charge, and would load at a very small price for freight rather than return in ballast or go elsewhere for freightage.

It seems to me, therefore, that all practical inducements tend and must continue to tend to carry our Western produce eastward in the channels it now follows, and that the idea that any considerable proportion of it will ever go South in order to reach Europe is utterly fallacious.

It does not follow, however, that the navigation of the Mississippi ought not to be improved, or that any judicious expenditure to that end will prove barren of public advantage. There is much commerce upon the river, and as the country increases in population, particularly the southern portion of it, this commerce will increase. It is mostly internal commerce, and will probably continue to be such. For a great region of country bordering upon the river and its navigable tributaries water communication and transportation will always be cheapest, and its competition with railroads will always maintain a salutary influence upon their charges. The intercourse between the Northwest and Southwest will be facilitated and cheapened more and more as navigation of the river is made easier and less expensive, and the river rates for travel or transportation will control, to a vast extent, the charges made by railroads over the whole South. The saving to the public by cheap water carriage is not measured by the quantity which takes that direction. That would be the case if there were no other means of communication; but railroads are compelled to compete with the river, and the charges they impose must always be low enough to induce the public to prefer them. Just as the northern lakes and canals control freights from West to East during the season of navigation, and compel railroad companies to keep their charges within reasonable limits, so the great river, from Cairo at all times, and everywhere during the milder seasons, restrains the greed which would otherwise impose an inordinate tax upon all the trade between North and South. It is not so material what proportion avails itself of the river, as it is that the river is always available. And the difference between existing rates of freight and what would be demanded were there no water competition, is the true measure of the advantage we derive from the river. Every improvement in river navigation, every means which tends to diminish freights by that route, affects the total sum of the North and South trade and puts the difference in the pockets of the producer or consumer.

I conclude, then, that the produce of the Northwest is never going south, except so much of it as the South may require for home consumption; that it will continue to go by its existing channels directly east, and that all schemes to divert trade to the southward must, from the very nature of things, and until the stern realities of business are entirely changed, prove utterly futile. The men of Saint Louis may dream that the wealth of the Northwest will eventually pour into their city, and the merchants of New Orleans may imagine that foreign commerce is to make it the chief city of the continent, not merely a rival but the superior of New York; but they are deceived. The laws of trade are against them. They will grow and they will be prosperous; but they will prosper most if they cultivate their own special fields to the best advantage, and waste no energies in the vain attempt to carry trade out of its direct and necessary channel.

Very respectfully,

GEORGE FRAZEE, *Surveyor*.

APPENDIX No. 18.

INFORMATION FURNISHED BY MR. SIDNEY D. MAXWELL, SUPERINTENDENT OF THE CINCINNATI CHAMBER OF COMMERCE, IN REGARD TO THE SOUTHERN TRADE OF THAT CITY.

THE SOUTHERN TRADE OF CINCINNATI.

Prior to the war, Cincinnati sustained very intimate business relations with the South. Her trade ramified throughout all the States adjacent to the Mississippi River, and was steadily penetrating the more remote districts. The complete rupture of these relations by the years of hostility materially changed, for the time being at least, the business aspects of Cincinnati. Compensation for the loss sustained, so far as it could be afforded, had to be found in the Northern States. Thus new channels were made for our enterprise which naturally survived the war. The advent of peace found the commercial interests of the South prostrated and her industries crippled. The conditions were not favorable to a sudden restoration of the former relations. Business to some extent had to find new channels in the South. Coupled with all this, and probably exerting a larger influence than any other, was the absence of ample railroad facilities between Cincinnati and the Gulf States. Such facilities as existed were in no sympathy with this city. Her freights were delayed, the rates furnished were unsatisfactory, and the facilities supplied inadequate. It is true the river did all it could to meet the want, but the years had wrought wondrous changes in the requirements of business. While the chief water channels remained the natural outlets for heavy merchandise and a wholesome check to the railroads, the demand for rapid transportation and quick communication was such that it was apparent this great section had outgrown its facilities. It was such considerations as these that turned the minds of the people of this city to the building of a railroad to the South which would be alike in the interests of Cincinnati and her former patrons, and that eventuated in the Southern Railway, now approaching completion. With returning prosperity and enlarged facilities there was a gradual resumption of business with the South. The nature of the business, however, has undergone important changes. The shipments of flour, grain, and some other commodities have been greatly diminished. Provisions and whisky, which at one time were shipped to the great centers for distribution, with enlarged facilities for reaching the interior, are largely transported directly to the place of consumption, while important classes of goods which before the war scarcely reached the Gulf States now find there very general distribution. The extent and nature of Cincinnati's business with the Southern States cannot readily be specifically defined. In some departments of trade this city penetrates the whole South. Her machinery, implements of husbandry, safes, wood-working machinery, furniture, provisions, liquors, clothing, boots and shoes, hardware, candles, soap, starch, carriages, and other classes of goods, go to all parts of the Southern States. Her heavy dry goods are largely distributed throughout Kentucky and Tennessee, to some extent in Arkansas, and in a limited way in the northern parts of the Gulf States. The same may be said of heavy groceries and drugs, though her light groceries go farther southward, finding liberal outlets in Arkansas and Louisiana as well as in other parts of the more remote South. It is not possible to define the trade by metes and bounds. It varies with seasons, classes of goods, and other circumstances. Some branches of trade scarcely reach the remote South, and yet the city has a sufficient foothold to warrant the expectation of great results to early follow the establishment of more intimate relations with that section. As to the points where this city is confronted by the trade of New Orleans, this is controlled much more by classes of merchandise than by geographical considerations. In general, it may be said that competition with New Orleans is little felt until reaching the Gulf States, and even there such an interlacing and overlapping are found that you cannot draw lines of demarkation. In many respects Cincinnati and New Orleans do not have business rivalries. Their interests are largely mutual. They represent latitudes and districts the products of which are widely different and constitute the most natural conditions of interchange. Between them there must always be an important trade in the commodities peculiar to their respective sections. It is noticeable, however, that in the economical tendencies

of our time and the growing disposition to ignore middlemen, shipments are made by Cincinnati to the very doors of New Orleans without passing through the hands of the latter's merchants, and, in turn, the sugar of Louisiana is beginning to find its way, in limited quantities, to the smaller cities of the interior, which were once the liberal customers of Cincinnati. This tendency to ship as directly as possible to the consumer is one of the signs of the times, as well in domestic movements as in the growing trade between the interior cities of this country and foreign ports.

In fine it may be stated that while Cincinnati in her general business has an established trade in the South, it is inconsiderable compared with what she will have, provided her southern road, when finished, shall be managed in a way to promote the interests of the people of both sections. If the largest facilities shall be furnished, at the lowest rates consistent with a suitable return to Cincinnati on her investment, the effect on the trade of the two localities must, in the end, be very marked. Cincinnati is already an important inland cotton market, but the actual business should be trebled or quadrupled. To the treasures of iron, coal, and other minerals in which the South abounds we have comparatively little access. Her timber we have scarcely reached. Not only must important results follow the opening of these comparatively new fields of wealth, but in general merchandise wholesome development must follow the opening to the South of additional facilities for transportation whose management shall be in thorough sympathy with the development of the unlimited resources of both sections, and with the effort to bring together two peoples whose best interests will be found in more intimate business and social relations.

As to the relation which Cincinnati sustains to the trade of New Orleans and the Eastern seaboard cities, respectively, in the great commodities named in your inquiry, it may be said, approximately, that all the molasses bought by Cincinnati is purchased at New Orleans, save such as is consigned to this city from the plantations, and the sirups which are mainly from New York and Buffalo. Neither of the exceptions comprise large quantities. Of the sugar 50 per cent. is purchased at New Orleans or shipped directly from the plantations to this city, to which there appears a growing tendency. Of the remainder, 60 per cent. is bought in New York, and the residue is divided between Philadelphia and Boston, the former doing the larger trade with Cincinnati. In coffee, fully 90 per cent. is purchased at Atlantic seaports. The remainder is divided about equally between New Orleans and Mobile. Of the purchases of coffee made East, 90 per cent. belongs to New York, and the remainder to Baltimore, Philadelphia, and Boston; Baltimore having the largest share. Dry goods, boots and shoes, hats and caps, silk and millinery goods, drugs, hardware, crockery, glassware, and merchandise generally of this class are not purchased at all in New Orleans. Neither are they purchased by our large dealers from the jobbers and wholesale houses of the Eastern seaports, but from the manufacturers or their agents. In boots and shoes and crockery, a considerable part is now manufactured in Cincinnati. The manufactures both of hardware and glassware are important here, while in the former it is estimated that one-half of all now sold in this city is produced west of the Alleghany Mountains. The clothing trade of Cincinnati is supplied by her own manufacturers, who in 1878 produced goods the aggregate value of which in men's and boys' wear was \$9,462,700. As each year this country is producing more of what she consumes and sending great supplies abroad, so is Cincinnati each year manufacturing more of what she sells, thus laying the broadest foundations for her future growth and prosperity.

It should be remarked, in answer to your inquiry as to the matter of shipment, that substantially all goods are now brought to this city on through bills of lading.

APPENDIX No. 19.

INFORMATION FURNISHED BY J. R. DODGE, ESQ., IN REGARD TO THE PRODUCTION AND DISTRIBUTION OF CEREALS IN THE UNITED STATES, IN REPLY TO INQUIRIES ADDRESSED TO HIM BY THE CHIEF OF THE BUREAU OF STATISTICS, OCTOBER 4, 1879.

PRODUCTION AND DISTRIBUTION OF CEREALS.

Question 1. Please to describe the distribution of cereal productions of the United States, with reference to home supply and to surplus exported to foreign countries, considering the subject by States and groups of States, in such manner as you may deem proper.

Answer. While the quantity of cereals moved from the States in which they are grown varies annually with the fluctuating foreign and domestic demand, it may be stated as an average of recent years that about one-fifth of the whole volume is involved in the distribution. The product having increased in ten years from 1,450 million bushels to 2,178 million bushels (as estimated for 1877), the export movement increased from 39 million bushels in 1868 to 139 million bushels in 1878. About 3 per cent. of the national supply was exported in 1868; nearly 10 per cent. in 1878. The estimates for the crop of 1878 make the still higher aggregate of 2,302,254,950 bushels, of which 246,611,507, or nearly 11 per cent., were exported. In the mean time the increasing population of sections of the United States not self-supporting enlarged domestic distribution, but not proportionally with the increase of exportation nor with the increase of production.

The yearly fluctuation in production of cereals is thus indicated:

Years.	Bushels.	Years.	Bushels.
1868	1,450,789,000	1873	1,538,892,891
1869	1,491,412,100	1874	1,454,180,200
1870	1,629,027,000	1875	2,032,235,300
1871	1,528,776,100	1876	1,962,821,000
1872	1,664,331,000	1877	2,178,934,646

The average of the above is 1,693,140,103 bushels, or 40.8 bushels per capita of the assumed average population of the period. Of this average supply corn constituted 63.1 per cent., oats 17.2, wheat 16.14, barley 1.81, rye 1.1, and buckwheat .65 per cent.

The proportion distributed of each variety of grain varies greatly. Barley, which constitutes so small a part of the cereal supply, is nearly all moved from the locality of its growth, and about one-third from the States in which it is produced. Wheat has attained a production so large that about 25 per cent. was exported in 1878, and four-tenths of the crop was moved from the States of surplus production.

Corn is necessarily consumed mainly in the neighborhood of its production, only 6.49 per cent. having been exported in 1878, and not exceeding one-eighth of the crop moved beyond the limits of producing States. The relative proportion of each crop exported, and that retained for consumption, is as follows:

Cereals.	Production.	Consumption.		Exportation.	
	Bushels.	Bushels.	Per cent.	Bushels.	Per cent.
Corn	1,342,558,000	1,255,365,890	93.51	87,192,110	6.49
Wheat	364,194,145	274,028,187	75.24	90,167,959	24.76
Oats	406,394,000	402,678,521	99.09	3,715,479	.91
Barley	34,441,400	30,519,899	88.61	3,921,501	11.39
Rye	21,170,100	16,930,859	79.98	4,239,241	20.02
Buckwheat	10,177,000	10,177,000	100.00	.....	.....
	2,178,934,646	1,189,698,356	91.32	189,236,290	8.68

This is nearly 9 per cent. of the quantity in bushels, and nearly 10 per cent. of the weight of total production. Until recently the movement of grain eastward for domestic consumption was greater than the shipments for export. In six years exportation increased from 74 millions to 189 in 1878, and in the past year, from July 1, 1878, to June 30, 1879, has advanced to the unprecedented figure of 246 millions. This does not include 15,565,190 pounds of bread and biscuit, maizena, and similar preparations to the value of \$1,740,471, and other grains valued at \$817,536, which would bring the real aggregate nearly up to 250 million bushels. With such a shipment of breadstuffs to foreign countries, which is arresting the attention of the civilized world and visiting a crushing competition upon the farmer of England and France, we still retain and use eight-ninths of the volume of production. If we make a comparison by values, the proportion exported is shown to be somewhat larger, by reason of a larger shipment of the more valuable kinds of grain, and also because prices are higher at ports of shipment than the average prices paid by consumers throughout the States. Giving equal prices to the proportions respectively shipped abroad and held at home for consumption, the intrinsic value of the exports would be nearly one-sixth of the whole, while the reported export value would be more than one-fifth of the aggregate farm valuation.

This calculation is on the basis of the estimates of the Statistician of the Department of Agriculture for the crop of 1878, and the exports are those of the fiscal year ended June 30, 1879, as follows:

Cereals.	Production.	Consumption.		Exportation.	
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Per cent.</i>	<i>Bushels.</i>	<i>Per cent.</i>
Corn	1,388,218,750	1,300,333,858	93.67	87,884,892	6.33
Wheat	420,122,400	272,434,751	64.85	147,687,649	35.15
Oats	413,578,560	408,128,424	98.68	5,452,136	1.32
Barley	42,245,630	41,530,094	98.31	715,536	1.69
Rye	25,842,790	20,971,496	81.23	4,871,294	18.77
Buckwheat	12,246,820	12,246,820	.....	.....	.....
	2,302,254,950	2,055,643,443	89.31	246,611,507	10.71

Maize.—The distribution of maize, its local production relative to population and farm animals to be fed, are essential points to be presented. The following table gives the number of cattle, of swine, and of bushels of corn produced in 1877, to each 100 of the estimated population (in 1878) of the several groups of States named:

Groups of States.	Corn crop of 1877.	Quantity, per 100 of population.	Cattle, per 100 of population.	Swine, per 100 of population.	Assumed population.	Increase per cent. of population.
	<i>Bush.</i>	<i>Bush.</i>	<i>No.</i>	<i>No.</i>		
New England	9,700,000	241	36	8	4,011,112	15
Middle States	77,570,000	755	38	29	10,276,184	15
Southern States	229,460,000	1,978	82	86	11,596,063	21
Kentucky and Tennessee	110,000,000	3,553	45	124	3,095,437	20
Central Western States	849,400,000	6,350	87	116	13,375,043	30
Lake States	62,650,000	1,827	66	40	3,428,966	28
Pacific States	3,778,000	250	192	50	1,507,086	50
	1,342,558,000	2,839	64	68	47,289,221	22.6

Here are about 28 bushels, or, excluding the exports, fully 26 bushels to each inhabitant, and only nine States lying in the heart of the West to exceed this average; all others, in fact, fall far short of it. Indeed, nearly all of the available surplus is found in a single group of States, the river States of the West—Ohio, Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.

Though maize is grown in every State and Territory of the United States, and constitutes five-eighths of the volume of cereal production, less than a fourth of the number have a corn supply exceeding their requirements. A small surplus is produced in Kentucky and Tennessee. The Lake States, Michigan, Wisconsin, and Minnesota,

have barely enough for home consumption, which is less per capita by a fourth than the average of the United States. Their comparative deficiency in corn is best seen in the numbers of swine, 40 to 108 in the corn belt. Their cattle, though becoming numerous, are in large proportion young or grazing stock, or milch cows, with comparatively few corn-feeders. The immense preponderance of corn-growing in the seven central States of the Great Valley is seen in the product of 62 bushels per capita in States less exclusively agricultural than those of any other group in the West or South, having an average of about two million people, many of whom are employed in manufacturing industries. A group of States with less than a third of the population of the country produces five-eighths of the corn supply of the United States.

The progress of this group in corn-culture during 38 years is thus exhibited:

States.	1849.	1859.	1869.	1877.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Ohio	59, 078, 695	73, 543, 190	67, 501, 144	97, 000, 000
Indiana	52, 964, 363	71, 588, 919	51, 094, 538	96, 000, 000
Illinois	57, 646, 984	115, 174, 777	129, 921, 395	260, 000, 000
Iowa	8, 656, 799	42, 410, 686	68, 935, 065	156, 000, 000
Missouri	36, 214, 537	72, 892, 157	68, 034, 075	103, 000, 000
Kansas .....	.....	6, 150, 727	17, 025, 525	98, 000, 000
Nebraska .....	.....	1, 482, 080	4, 736, 710	38, 000, 000
	214, 561, 378	383, 242, 536	405, 248, 452	848, 000, 000

The rate of progress is liable to be misunderstood in a casual reading of these figures. The crop of 1869 was called a "failure"; its acreage was sufficient for a crop of 500,000,000 bushels in a good season. Allowing an increase of population in these States of 30 per cent. in eight years (the increment is far greater in Kansas and Nebraska) the product per capita would be increased to 63 bushels. In comparison with the thirty-one other States of the country this group of seven makes a showing as follows:

Groups of States.	Product of 1859.		Product of 1877.	
	<i>Bushels.</i>	<i>Per capita.</i>	<i>Bushels.</i>	<i>Per capita.</i>
Group of seven States	383, 242, 536	52	848, 000, 000	63
Other States and Territories	445, 550, 206	19	494, 558, 000	15

Were the requirements of consumption in exact proportion to population there would have been a surplus of 35 bushels in these States, and a deficiency of 13 in all others. This surplus of seven States would be nearly equivalent to the production of thirty-one States.

The question often asked, What is the necessary consumption of maize per capita? can only be answered by saying that no fixed quantity is a necessity for all States alike or even for a single locality. It depends not only upon the demand for pork and beef and spirits, but also upon the comparative quantity and cheapness of hay and other forage with which corn comes into competition. If the product falls as low as 800,000,000 bushels in a cold and wet season, the causes which produce comparative failure act to swell the product of hay. The always abundant supply of corn stover is better utilized. There is still a sufficiency of feeding material, so that the most obvious result of the scarcity is a higher price for corn and probably a slight increase in the cost of meat and other animal products. If 1,300,000,000 bushels are produced corn is very cheap. There is actual waste of coarser feed. Wild hay in the West is less extensively cured. Prices of meat, especially of pork products, are somewhat cheapened, and such cheapness often results in increased demand. So the corn currency is both interconvertible and elastic.

Another inquiry is frequently made, What is the necessity for 40 bushels of cereals per capita in the United States when only 17 are required in Europe? It is easily answered. Grain is not only the food of man but the feed of animals, and in Europe grasses and forage crops occupy a larger place in feeding economy than in this country. Great Britain excels every other country in high feeding and rapid fattening of cattle, yet produces scarcely three-fourths the average European supply of animals, and her imports are only used for human food (and beverages), and corn mainly for feed of horses in cities. In that country mangels, turnips, and forage plants take the place occupied by maize in this country and in some districts of Southern Europe. The refuse of

the beet in sugar-making, in Central Europe, also furnishes a valuable substitute for the cereals in feeding farm animals.

With the present foreign demand for animal products, and under the prevailing system of rural economy in the United States, there is a reasonable requirement of 25 bushels of corn per capita, or 50 per cent. more than the average need of Europe at present, yet a reduction to 22 bushels would ordinarily cause no serious inconvenience.

The wheat surplus.—The wheat surplus is produced entirely in that portion of the country north and west of the Ohio River, in the central area lying between that river and the lakes and the Alleghany and Rocky Mountain ranges, and in a smaller area on the Pacific Coast. Lying between are broad areas of mountain, valley, and high plateau ready for the plow, and other tracts available for cultivation with the aid of irrigation, which will become the wheat-fields of the future.

The portion of the country requiring a part of this surplus comprises New England, the Middle States, and the cotton States. New England produces nearly three-tenths of a bushel for each inhabitant; the Middle States grow about half the quantity necessary for a full supply, or $3\frac{1}{4}$ bushels; the Southern Atlantic and Gulf States almost as much; and Kentucky and Tennessee are self-supporting with nearly 6 bushels. All the remaining States, except Nevada and Colorado, yield a surplus. This surplus, for consumption in 1878, was $11\frac{1}{2}$ bushels per capita in the corn-growing belt between Ohio and Kansas, $22\frac{1}{2}$ bushels in the Lake belt, and 23 in the Pacific States and Territories, but fully 25 bushels in a year of large production in California.

While but seven States afford an appreciable surplus of corn, there are twelve that aid in supplying the wheat demand of the other States and of foreign countries. What is the home demand? With increase of population and of area seeded the yearly increase in requirement for home consumption is at least 6,000,000 bushels. Reckoning the population in 1878 at 47,289,221, at different rates of increase for the several sections, ranging from 15 per cent. in New England to 50 in the Rocky Mountain and Pacific region, the estimated demand is—

	Bushels.
For bread.....	223,302,383
For seed.....	40,913,308
Total.....	264,215,691

Compare this quantity with the crop of 1877, minus the exportation of the fiscal year commencing July 1, 1877, and ending June 30, 1878, with the following result:

	Bushels.
Estimated crop of 1877.....	364,194,146
Exports of wheat and flour.....	90,167,969
Leaving a difference of.....	274,026,187

This is 9,810,496 bushels more than the sum of the estimated quantities needed for seed and bread. After allowing further for wheat fed to farm animals, mainly in California, but to a limited extent elsewhere in sections of abundant production, and a small amount lost by fire or casualties of transportation, we may fairly assume that this excess has been nearly exhausted.

The requirement of wheat per capita is not the same in all sections. In the South there is a large proportion of corn used, by whites as well as negroes. There are localities in the cotton States where half the average rate of consumption of wheat for the whole country is not sustained. In Maryland and Virginia the proportion used is much larger than in Alabama or Mississippi. Taking the twelve States from Maryland to Texas together, while some use less than four bushels and others nearly five, four bushels may be deemed a full average. For Tennessee and Kentucky a barrel of flour per capita, or $4\frac{1}{2}$ bushels, is assumed; and for the East, where little corn is used, and for the West, where wheat is so abundant and cheap, 5 bushels per head. We find in support of these reasonable assumptions that the facts of local and general production, as well as those of distribution, as found in the records of trade and transportation, point to substantially the same results. On the basis of the crop of 1877,

the consumption, deficiency, or surplus of the several groups of States may thus be stated:

	Production.	Consumption.		Surplus.	Deficiency.
		For bread.	For seed.		
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
New England	1,174,800	20,055,500	104,800	.....	18,985,500
Middle States	34,180,000	51,380,970	8,514,683	.....	20,715,653
South Atlantic and Gulf	37,250,000	46,384,012	6,814,150	.....	15,948,162
Kentucky and Tennessee	18,550,000	13,928,466	2,896,714	1,726,820	.....
Western Central	161,450,000	66,875,215	16,860,060	78,214,725	.....
Lake States	77,214,348	17,141,980	6,778,260	53,294,106	.....
Pacific and Territories	24,375,000	7,535,180	4,447,641	22,392,179	.....
	364,194,146	223,302,383	40,913,308	155,627,830	55,649,375

NOTE.—The States comprising these several groups are as follows:

1. New England States—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.
2. Middle States—New York, New Jersey, Pennsylvania, Delaware.
3. South Atlantic and Gulf—Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas.
4. Kentucky, Tennessee.
5. Western Central—Ohio, Indiana, Illinois, Iowa, Missouri, Kansas, Nebraska.
6. Lake States—Michigan, Wisconsin, Minnesota.
7. Pacific States and Territories—Colorado, Nevada, California, Oregon, Territories.

The first three groups, comprising twenty-two States, on or near the Atlantic and Gulf coasts, with more than half of the population of the country, produce scarcely one-fifth of the crop, or 71,604,800 bushels, and require from other States 55,649,375 bushels. On the other hand, two groups, including ten States, west and north of the Ohio River, with an assumed population of about 17,000,000, or two-thirds of the number in the above-mentioned twenty-two, produce a surplus of 131,508,831 bushels.

On the basis of the above figures the distribution of the crop of 1877 would be as follows:

	<i>Bushels.</i>
Estimated crop of 1877	364,194,146
Used for bread	223,302,383
Used for seed	40,913,308
Surplus and loss	9,810,496
Exported	90,167,959
Total distribution	364,194,146

The seed is estimated at the rate of $1\frac{1}{4}$ bushels per acre, in accordance with the result of a statistical investigation relative to modes of seeding and quantity used throughout the country. As few would assent to a larger estimate of production in 1877, and as the facts of local consumption seem to forbid inexorably an assumption of a smaller quantity, it is evident that these figures of production are substantially correct. Yet it cannot be assumed that the exact amounts indicated by sections are invariably required.

Differences in prices, the result of abundance or scarcity, may slightly affect consumption of different years in any one section. With a small crop and high prices there will be some diminution of consumption, especially in localities where corn bread is largely used and wheat is not deemed an absolute necessity. In cities and towns of the populous seaboard States consumption is very little restricted by increased cost, as wheat bread is there a necessity that cannot well be economized.

Since the calculation above was made for the crop of 1877, the estimates of the Department of Agriculture for 1878 have been completed. Applying the same ratios of local consumption and of seeding and adding the exports, we have the following distribution for 1878-79:

	<i>Bushels.</i>
Used for bread ($2\frac{1}{4}$ per cent. increased population)	223,877,979
Used for seed	48,162,840
Exported	147,637,649
Total distribution	424,722,467

This is 4,606,067 more than the estimated production, a difference less than half of the surplus in the calculation of the previous year. The export year does not quite

coincide with the crop year; the local ratios of consumption are not assumed to be infallibly correct, nor can they be inexorably uniform from year to year under all circumstances of price and ability to purchase; yet, in view of these multifarious causes of discrepancy and the added uncertainty of the accuracy of these estimates, the test could not be more satisfactory, nor the results more in harmony with all the ascertainable data of production and distribution.

WESTERN MOVEMENT OF THE CENTER OF PRODUCTION.

Question 2. Please to describe the western movement of the center of cereal production, stating the rate of movement of the centers of production of wheat and corn, respectively.

Answer. The products of wheat and corn at different periods, and the longitudinal lines dividing equally the volume of such production, are thus expressed:

Years.	Wheat.	Degrees of longitude.	Corn.	Degrees of longitude.
	<i>Bushels.</i>	° ' "	<i>Bushels.</i>	° ' "
1849.....	100,485,944	81	592,071,104	85
1859.....	173,104,924	85 24	838,792,742	86 30
1869.....	287,745,626	88	760,944,549	88
1877.....	365,094,800	89 6	1,342,558,000	89 6

The production is that returned by the census, except that for 1877, which is from the statistical returns of the Department of Agriculture.

The westward movement of the central line of wheat production in twenty-eight years measured $8^{\circ} 6'$. Calculating the distance traversed westward on the line of the fortieth parallel (which also nearly equally divides the crop north and south) at the rate of 280,135 feet to each degree, the movement was equal to 430 miles, or 15.3 miles per annum. The movement of the line dividing equally corn production, commencing in 1849 4° or 212 miles farther west, and reaching the same line of longitude as wheat in 1877, had a velocity only a fraction more than half as great as that of wheat. The rate was 7.78 miles per annum, and the distance traversed 218 miles.

The line for wheat changed from Eastern Ohio in 1849 to Eastern Indiana in 1859, Eastern Illinois in 1869, and Central Illinois in 1877. That for corn was nearly twenty years in moving across the State of Indiana.

The progress of the wheat center was greater in ten years than in the subsequent eighteen. This inequality of rate of movement, so noticeable as to wheat, is not shared by corn, which was $1^{\circ} 30'$ for each of the two decades, and $1^{\circ} 6'$ for the past eight years.

The tendency of wheat production to move westward is still active, and may move onward for many years at a reduced rate of movement per annum, as wheat culture subdues the high plateaus and mountain valleys between the Missouri and the Pacific coast. On the other hand, the western progress of corn production must henceforth be very slow, being effectually barred by the elevation reached near the western border of Nebraska and Kansas, which makes corn culture either precarious or impossible throughout nearly the entire area westward to the Pacific Ocean; and its center must therefore remain near the Mississippi River.

RATE OF YIELD AS AFFECTED BY MODES OF CULTURE.

Question 3. Please to describe the local changes in the rate of yield of wheat and corn respectively, as affected by the skill and intelligence with which the culture of these products is carried on, and with especial reference to the effect of fertilizers and soil depletion.

Answer. The prevailing practice in this country, as in the settlement of all new countries where lands are productive and cheap, has been exceedingly careless and exhaustive, especially in the production of cereals. A superficial system, which gives for a few years the largest production at the smallest cost for labor, is almost invariably adopted. A gradual decline in yield soon follows, partly from soil exhaustion and in part from smothering by weeds, and from the inability of plants of impaired vitality to withstand the attacks of insects. This has been the case, as respects wheat, in Western New York, in Iowa, California, and other noted wheat districts, though its real progress is masked by the fact of constant additions of fresh lands to the breadth in cultivation.

In the course of time this irrational system is gradually abandoned, from necessity, when it yields no profit, and is succeeded by an expensive course of improvement, with employment of fertilizers and the application of skill and science. The general

prevalence of careless culture is seen in the average national yield for a series of years, which is about 12 bushels per acre. The opposite extreme of highest and most scientific culture is seen in Great Britain, where for thirty years the average yield has been about 28 bushels. The European states occupy all points between these extremes, according to degree of advancement in rural practice. Hungary, with a richer soil naturally than England, has the same wheat average as the United States.

But the different States of this country illustrate as wide a range of yield as those of Europe; and, as a rule, those having the richest lands have a low rather than high rate of yield. Large yields are obtained by fertilization and thorough culture rather than by natural fertility. The following statement of the average yield, for the past five years, of States representing different sections of the country, will illustrate this:

Year.	New Hampshire.		New York.		Maryland.		Georgia.		Michigan.		Iowa.	
	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.	Wheat.
1873.....	37.5	15	31	13.5	21.4	11.3	12.3	7	31	12.2	29	13
1874.....	36.4	16	30	15.6	20.5	10.7	11.1	7.3	27	14.2	29.2	11.6
1875.....	38	17	34	8	30	11	10	7.5	33	12.5	25	9.7
1876.....	42	15	30	15	29	12.5	11	6	29	12	30	6.1
1877.....	42.5	17	33	18	28	13.8	10.5	9.5	31	17.5	32.5	14.5
Average...	39.7	16	31.3	14	25.7	11.6	10.9	7.4	30.3	13.9	31.3	10.9

The rate of production stands highest in New England, because the only possibility of profit comes from fertilization and careful cultivation. The available supply of fertilizers limits such cultivation to very small areas. New York and Michigan have about the same average for wheat, and the difference is slight in the yield of corn. The new corn lands of Iowa surpass those of Maryland in productiveness, but the general and comparatively liberal use of fertilizers for wheat in Maryland more than counterbalances the superiority of soil in Iowa. The low rate of yield in Georgia is representative of the impaired production of most of the cotton States from the predominance of the culture of the favorite crop and the comparative neglect of all others.

A single example of deterioration in yield illustrates the uniform result of the practice in vogue in primitive wheat-growing. The average yield in California for five years prior to 1860, according to the reports of the agricultural society of that State, was 20 bushels; for the last ten years the average has been but 14 bushels. The assessors' returns of that State from 1868 to 1876, inclusive, made 13.93 bushels; the estimates of the Department of Agriculture for the same period, 13.66 bushels. The year 1877 made the average still lower. Poor crops in Minnesota are more frequent than formerly, and the tendency is to lower averages. Taking the years of low yield in order, 1867 gave 14.64 bushels, 1871 made a lower yield of 12.28, and 1876 resulted in the still lower level of 9.61 bushels.

DIFFERENCES OF PRICE IN HOME MARKETS.

Question 4. Please to describe the differences in the home market price of wheat and of corn in different localities as affected by the cost of transportation and by other causes?

Answer. The average farm prices of wheat and corn in December of 1877 and 1878, respectively, in a few States, representing sections in which similar conditions affecting prices may be presumed to exist, are thus presented:

State.	Wheat.		Corn.	
	1877.	1878.	1877.	1878.
New Hampshire.....	\$1 00	\$1 48	\$0 79	\$0 61
New York.....	1 23	1 08	00	50
Maryland.....	1 25	09	58	43
Georgia.....	1 36	1 18	06	61
Texas.....	1 21	08	43	41
Tennessee.....	1 04	84	40	33
Ohio.....	1 24	08	40	33
Illinois.....	1 04	75	39	28
Minnesota.....	01	51	38	28
Missouri.....	1 00	67	27	26
California.....	1 30	1 08	95	00

The average farm value of wheat for the whole country was \$1.08 in 1877 and 78 cents in 1878; of corn, 35.8 cents and 31.8 cents respectively. The export price of wheat was \$1.34 in the fiscal year 1878, and of corn 56.2 cents—the produce of the year 1877.

The statement above shows that the prices of wheat and corn in New England were uniformly above the export price, because the cost of transportation from the West to inland towns averages higher than to the seaboard cities, and also because the home produce, especially of corn, is held at a higher valuation than the eastern grain that competes with it.

In the Southern States prices are often higher than at the ports of exportation—always when an insufficient home supply, rendering necessary receipts from the West, concurs with freight rates higher than those to the seaports to swell local values. In recent years large areas of the South which are self-supporting have reported prices lower than those of exportation. The fluctuations from year to year, and the differences in average prices of States in the same year, are very great in the cotton States, owing to comparative local abundance or deficiency in production. For instance, the price of wheat in Texas, in December of 1877, was \$1.21, and but 86 cents in 1878, the acreage having increased and the yield advanced from 12 to 16 bushels. The prices of corn, on the contrary, slightly advanced from 43 to 44 cents, not because the yield was less, but on account of the great demand, caused by heavy immigration, for a grain of which nearly ten times as much as of wheat is used. Then there are still greater differences in price in the several counties of a State, owing to want of railroad transportation. If there should be a local surplus, the price will be low, and if a deficiency, which may not be enough in quantity to induce competition to supply it, the price will advance in proportion to the necessities of the demand.

INFLUENCE OF FOREIGN DEMAND ON PRICE.

Question 5. Please to describe the effect of foreign demand upon the price of wheat and corn in this country.

Answer. The price of grain, as of anything else, is controlled by the demand, and any augmentation of existing demand, whether from domestic or foreign needs, tends to advance its price. The idea that the price paid for corn exported controls the domestic price, or affects the rate of value of the nineteen-twentieths of the crop that is used at home, any further than would an increased home demand for the other twentieth, is absurd. If it is wanted abroad at a valuation prevailing here, it is exported to meet such demand; and instead of forty or eighty million bushels, two hundred could be sent in any year of moderate abundance, with no other effect than an increase of price in proportion to enlarged demand. The range of differences in production of different years is five times the quantity of the largest exportation ever made. So it is not the foreign demand that accounts for high price in corn, but a poor crop. In illustration, the export of 1874-75 was about 30,000,000 bushels, and the average farm value of the crop of 1874, 64.7 cents per bushel; the export of 1877-78 was about 87,000,000 and the average price 35.8 cents. An exportation three times as large as that of 1874 certainly did not depress the price 45 per cent., but it is very plain that a product 57 per cent. larger did produce the heavy decline. Political economists may tell us in vain that the foreign value of an exported article fixes its price for home consumption, when common sense suggests that 500,000,000 bushels of increased production is far more potent to depress than a foreign demand for 90,000,000 can be to raise the price. In truth, comparatively large as our corn exports have become, they are of minor influence in affecting the value of the crop. The exports of meat, butter, cheese, wool, and spirits have a decidedly stronger influence. Placing side by side the production and export with the average home value, it will be seen how insignificant a cause of disturbance in corn values is the foreign trade:

Years.	Export.	Home value.	Product.
	<i>Bushels.</i>	<i>Cents.</i>	<i>Bushels.</i>
1872-73.....	40,154,374	38.9	1,092,719,000
1873-74.....	85,985,834	48.	932,274,000
1874-75.....	30,025,036	64.7	850,148,000
1875-76.....	50,919,582	42.	1,321,098,000
1876-77.....	72,652,611	37.	1,283,827,500
1877-78.....	87,192,110	35.8	1,342,556,000

Careful examination of this table will show very clearly that the price depends upon quantity grown. A reduction of 10 per cent. in quantity in 1873 from a medium crop only, raised the price from 38.9 to 48 cents, and a still worse "failure" in the following

year had a cumulative effect in advancing the price to 64.7 cents. Since 1874 there has been a succession of large crops, attended necessarily by a constant reduction in price. But we cannot expect an exact ratio between the product and the price in different years, because there are minor causes which have some influence. Among these there has been a potent cause of reduction of price in the general shrinkage of all values during this period. On the other hand, several causes have tended to counteract the decline; among them, 1st, the rapid increase of population stimulating the demand; 2d, the export of live cattle for slaughter, and the growth of the fresh meat and preserved meat trade; and, 3d, the increased exportation of corn. It is seen that while the exports increased from 30 to 87 million bushels, the price declined from 64.7 to 35.8 cents, which does not prove that exportation has no influence in advancing price, but that its power is too feeble to cope with an increased production of 492 million bushels.

It is neither probable that exportation of corn will be greatly increased, nor is such increase desirable, as there is usually more profit in the sale of meat and other products of corn. The loss of soil fertility by such export, and the cost of transportation, which is often far greater than the original value of the grain, will ultimately bring both farmer and farm to poverty, if the policy of selling corn is long persisted in. On the contrary, the production of meat and wool will enrich the soil and furnish products for transportation worth \$100 and \$300 per ton, respectively, instead of \$10. At present, in addition to the legitimate cost of transporting these cheap and bulky products, they must bear a large proportion of the cost of western-bound goods of high value in proportion to weight, because this policy requires the return empty of three of every four of the cars moved eastward.

The influence of foreign demand upon prices is far more potent and commanding in the case of wheat. It involves a much larger proportion of the crop, reaching last year 24.76 per cent. of its volume. The proportion is so large, and the range of its fluctuation so wide, that serious disturbance in the markets often results. It not unfrequently occurs that a moderate yield is accompanied by low prices, and a large crop is marketed at high rates. There is no doubt that the wheat farmer is at the mercy of the foreign demand. If British wheat-fields are blighted, there is rejoicing on our prairies over remunerative harvests. If the garnerers of continental Europe are full and England's wants are at a minimum, there is dissatisfaction in the West, liable to be vented on the currency, the tariff, or the railroads.

While corn is mainly used for feeding and fattening animals, wheat is almost exclusively appropriated as bread for man. While a short crop of the coarser grain may be supplemented by the substitution of hay, stover, and roots, and a very large one may be used more lavishly in competition with other feeding material, wheat must wait almost exclusively on the requirement of man for bread supply, and be subject to greater fluctuation in value as an inevitable result of this limitation of use. It is also subject to greater fluctuations in rate of yield than corn and other crops from the vicissitudes of the seasons and the depredations of insects. The quantity required annually for exportation is still more variable than the amount of the crop; the heaviest foreign demand may occur in a season of low production, and the lightest in a year of abundance, increasing the range of fluctuation. The conditions of a successful yield are so different, however, as between winter and spring wheat, that a failure of the one is often offset by a large yield of the other, so that the measure of local injury and loss is never fully apparent in the average yield of the whole country. and the same cause, of course, limits the range of fluctuation in prices.

Yet this range is quite too wide for the satisfaction of the wheat-grower, who is at one time elated with remunerative prices, and at another depressed by rates that fail to pay the cost of production. In 1868 the average export price was \$1.91 per bushel; in 1878, \$1.12. The crop of 1873 was much larger than the three preceding, yet the heavy foreign demand advanced the export price beyond that of any previous crop, with one exception, back to 1868. The exportation of that year was 91,000,000 bushels, never again equaled until 1878, and yet the export price was \$1.42. Again, in 1878-79, the world was astonished that the United States could make good the unprecedented deficiency of France, after responding to the requirements of a British crop failure, without increasing the price of wheat. With such a crop as in 1878, but for European deficiencies, prices would have proved "ruinous" to wheat-growers.

FORM OF FUTURE CORN EXPORTATION.

Question 6. Please to state your views as to the probable disposition of future corn crops, with especial reference to the magnitude of the exportation of corn, whether in the form of grain or of some of its products.

Answer. Exportation will increase in absolute quantity, probably in the form of raw grain, certainly in the many products of maize. It is not to be anticipated that the quantity in proportion to population will continue to increase, unless for a very brief period. The rapid increase of population will enlarge immensely the home de-

mand, and immigration will tend in a slight degree to relieve the pressure of foreign want without diminishing foreign consumption, the surplus population only being withdrawn, leaving higher wages and ampler means for procuring food supplies.

The supply of maize has kept pace for thirty years with increase of population, though the number of workers in agriculture is proportionally less as the industries of manufacturing, mining, and transportation have been developed. Agricultural implements have enlarged the productive power of the rural laborer; he has been relieved in part from the drudgery of his occupation, and allowed time for the exercise of more intelligent labor in soil improvement, without any reduction of the former plethoric production of maize, the first of American field crops. The difference in production and exportation of the years 1868 and 1878 indicates a rapid growth of this interest in the past ten years

	1868.	1878.
Crop, bushels	768,320,000	1,342,558,000
Exportation of domestic grain (corn), bushels	11,147,490	85,461,098
Exportation, bacon and hams, pounds	43,659,064	592,814,351
Exportation, pork, pounds	28,690,133	71,889,255
Exportation, lard, pounds	64,555,462	342,667,920

In this period, great as is the advance in exportation, corn in grain has held an even race with its products, increasing 666 per cent., while the increase in pork products has been 635 per cent. The recent impulse to foreign trade in fat beeves, and the great growth of the fresh meat trade which had its origin three years ago, tend to enlarge corn exportation in the form of secondary products. Maize has never yet made much progress in displacing wheat and rye as a bread grain among European peoples whose preferences have been fixed by the habits of hundreds of years, and the prospect is not favorable for the early accomplishment of so radical a change. As a substitute for oats or other horse feed, it is gradually gaining favor by its cheapness, and in those (few) countries which import horse feed to any appreciable extent, its use will increase if prices continue comparatively low. There is another bar to rapid extension of this trade, the ruinous proportion of transportation in the element of ultimate cost. Kansas, Nebraska, Iowa, and Illinois furnish corn for shipment to Liverpool from Chicago. The average value of the crop of 1877, for those States, was 25 cents per bushel on the farm, and the cost of shipment from Chicago averaged 27 cents, at rates low without precedent up to that date. With the freight added from the farm to Chicago, the transportation from the farm to Liverpool would be about 150 per cent. of the original value, and the commissions and profits another 50 per cent. So we are not surprised to find the average value of Chicago No. 2 corn in Liverpool 77 cents per bushel, three times the home value. The cost of carriage is too great to warrant the expectation of great extension of this trade. In the summer of the present year, however, rates from Chicago to Liverpool were at one time as low as 16 cents per bushel.

On the contrary, the economies of transportation, the increasing use of meats in foreign countries, and the opportunity for ingenuity in catering to the tastes of foreign consumers in the preparation of food products, lead to the belief that the trade in these condensed forms of maize is as yet in its infancy, and destined to great expansion in the future.

THE CAPACITY OF THIS COUNTRY FOR CORN CULTURE.

Question 7. Please to state your views as to the capacity of this country to extended corn production.

Answer. The present area in corn is probably a little in excess of 50,000,000 acres; present area in farms near 450,000,000 acres; total area of States, 1,275,000,000, including Territories, 2,311,000, though three-fourths of the territorial area is unsuitable for corn growing. Those sections of country in which corn will grow well, practically excluding only the Rocky Mountain region above 5,000 feet elevation, and Alaska, might be placed at 1,500,000 acres. Exclusive of waters, wastes, cities and towns, and necessary forest lands, there would be left about 900,000,000 acres suitable for improvement and cultivation. More than one-fourth of the present improved lands in this area are in corn; if it should be desirable to maintain so large a proportion in the future, which is uncertain, a breadth of 200,000,000 acres might be attained. At the average rate of yield of the past ten years—26.4 bushels—this breadth would represent a product of 5,280,000,000 bushels. Illinois, cultivating a fourth of her farm area in corn, now produces fully one-twentieth of this quantity. When our entire territory becomes as fully occupied as Illinois, a larger rate of yield will be a necessity. Yet the tendency will be, with increase of population, to a diversity in production which will leave to maize a smaller proportion of the cultivated area than it monopolizes at present.

CHANGES IN THE PRODUCTION AND SHIPMENT OF CORN.

Question 8. Please to state your views as to the probable changes in the surplus-producing territory and the modes of shipment of corn.

Answer. The seat of corn production was formerly in the South. Tennessee was, in 1840, the first in rank. In 1849 fifteen Southern States produced 59 per cent. of the national product, ten years later but 52, and now but a third of the crop. Tennessee, in 1849, yielded its position as first in rank to Ohio, and took the fifth, Kentucky, Illinois, and Indiana in their order intervening. In 1860 Tennessee fell another point, Illinois assuming the first place, followed by Ohio, Missouri, Indiana, and Kentucky, the latter exchanging the second place for the fifth and Missouri jumping from the sixth to the third. In 1870 Illinois kept the capital position, though with only half a full crop. Iowa displaced Ohio as second, and Ohio, Missouri, Indiana, Kentucky, and Tennessee following in the same order as in 1860, though each stood one degree lower in rank. In 1877 Illinois and Iowa retained the first and second rank, Missouri and Kansas both jumped Ohio, and then followed, in the same order as in 1870, Indiana, Kentucky, and Tennessee.

Eleven principal States have produced about three-fourths of the whole crop at each of these periods—in 1849 and 1877 77 per cent., 74 per cent. in 1860, and 75 in 1870. Six States appear in each list of eleven, viz, Ohio, Kentucky, Illinois, Indiana, Tennessee, and Missouri; while Virginia, Georgia, Alabama, North Carolina, and Mississippi, in the list of 1849, all fail to appear in that of 1877, their positions in relative rank being taken, respectively, by Kentucky, Tennessee, Texas, Pennsylvania, and Wisconsin. The transference of production from the South to the West is thus shown:

Groups of States.	1849.	Per cent.	1859.	Per cent.	1869.	Per cent.	1877.	Per cent.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>	
Southern States.....	348,892,271	59	436,899,827	52	318,116,583	42	448,410,000	33
All other States and Territories.....	243,078,838	41	401,892,915	48	442,827,966	58	898,148,000	67
	592,071,104	.....	838,792,742	.....	760,944,549	.....	1,342,558,000	.....

The following are the States that have produced three-fourths of the supply:

States.	1849.		1859.		1869.		1877.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
1. Ohio	59,078,686	1. Illinois ..	115,174,777	1. Illinois ..	129,821,395	1. Illinois ..	260,000,000
2. Ky 58,672,561		2. Ohio 73,543,190		2. Iowa 68,985,065		2. Iowa 136,000,000	
3. Illinois .. 57,646,984		3. Mo 72,892,157		3. Ohio 67,501,144		3. Mo 103,000,000	
4. Indiana .. 52,964,363		4. Indiana .. 71,588,919		4. Mo 66,034,075		4. Kan 98,000,000	
5. Tenn 52,276,223		5. Ky 64,043,633		5. Indiana .. 51,094,538		5. Ohio 97,000,000	
6. Mo 36,214,537		6. Tenn 52,089,926		6. Ky 50,091,006		6. Indiana .. 96,000,000	
7. Virginia .. 35,254,319		7. Iowa 42,410,686		7. Tenn 41,343,614		7. Ky 58,000,000	
8. Georgia .. 30,080,009		8. Virginia .. 38,319,999		8. Pa 34,702,006		8. Tenn 50,500,000	
9. Alabama .. 28,754,048		9. Alabama .. 33,226,282		9. Virginia .. 25,847,169		9. Texas 49,000,000	
10. N. C. 27,941,051		10. Georgia .. 30,776,293		10. Texas 20,554,538		10. Pa 41,128,000	
11. Miss 22,446,532		11. N. C. 30,078,564		11. N. C. 18,454,215		11. Wis 38,500,000	
Total.....	461,329,462		624,144,426		574,478,765		1,048,638,000
Per cent.....	77		74		75		77

During the whole period the central States of the Mississippi Valley have produced a very large proportion of the crop. The marked changes in locality of production are: 1. A decline in fifteen Southern States from 59 per cent. to 33 per cent. of the crop; 2. An advance from 12 per cent. to 37 per cent. west of the Mississippi River. The movement of the center of production has thus been rapidly northward, and, with still greater rapidity, westward. The Western movement is thus analyzed:

	1849.	1859.	1869.	1877.
Percentage of crop grown on Atlantic coast.....	30	24	20	14
Percentage of crop grown in the central belt.....	58	55	53	49
Percentage of crop grown in the trans-Mississippi belt.....	12	21	27	37

Amid all these changes, the proportion of the central belt, between the Alleghenies and the Mississippi River, has declined by very slow degrees, and will continue, for a time, to recede slowly, until the lands of the Missouri Valley are more fully occupied. Should cattle husbandry receive the attention in the South which its importance in scientific agriculture demands, after the West becomes crowded with population it is probable that the line of motion of the center of corn production will, at some future time, turn southward again. There is room for wonderful development of corn growing south of the Arkansas, including the Indian Territory, and also, with a recuperative system of culture, in the Southern States east of the Mississippi.

The surplus-producing territory has ever been in the great central basin west of the Alleghenies. Forty years ago the available surplus was produced in the States drained by the Ohio and its tributaries, most largely in Tennessee and Kentucky; ten years later these States held nearly equal rank in production with the three on the north bank of the Ohio. Twenty years ago, in the height of Southern *ante-bellum* prosperity, production between the Ohio and the lakes had surpassed greatly that of the southern portion of the Ohio Valley, and Missouri and Iowa, west of the Mississippi, began the strife for precedence with Kentucky and Tennessee. The movement has since been so strongly westward that nearly four-tenths of the crop of the country is now grown west of the Mississippi. There are now only nine States that produce a surplus: Kentucky and Tennessee about one-fourth more than the average for the country, and the seven States of the corn-growing belt, three east and four west of the Mississippi, more than twice the average product in proportion to population. Of these, Ohio, by virtue of a large population, has a small surplus for other States, leaving Indiana and Illinois on the east side of the Mississippi, and on the west Iowa and Nebraska, Kansas and Missouri to answer almost alone the outside demand for maize. The increase of cattle-feeding in Indiana and Illinois threatens to relegate to the country west of the Mississippi the business of shipping corn in grain. Thus the most bulky form in which this grain can be exported is that in which it is sent the greatest distances to market, in apparent violation of the plainest principle of economy, an anomaly arising not from choice but from the necessities of primitive agriculture, which has few cattle to consume the corn or money to buy the requisite animals for such condensation and conversion. This lack of means for consumption makes the surplus self-competing, till prices are so low as to afford a profit for the middleman over the costs of handling and transportation, whether the distance be 5,000 miles or 10,000. It is a position in which the consumer has no part whatever in fixing the price.

CAPACITY OF THIS COUNTRY FOR THE PRODUCTION OF WHEAT.

Question 9. Please to state your views as to the capacity of the country for extended wheat production.

Answer. While the western line of maize culture traverses the eastern slopes of the Rocky Mountains at an average elevation of about 5,000 feet, wheat can be grown 2,000 to 3,000 feet above the maize line. Thus maize growing is excluded from Wyoming, Montana, Idaho, Washington, and much of California, Arizona, Utah, Colorado, and Dakota. On the contrary, only the higher elevations of the two Sierras, Nevada and Madre, are unsuitable for spring wheat culture by reason of low temperature. The lack of rain and of water available for irrigation constitutes a much stronger inhibition of wheat growing in this region. The territorial area west of the Missouri River, not including the States of Texas, Kansas, or Nebraska, and not counting Alaska, is officially reported as follows:

	Acres.		Acres.
Dakota	96,596,128	Utah	54,065,043
Wyoming	62,645,068	Nevada	71,737,600
Montana	92,016,640	Arizona	72,906,240
Idaho	55,228,160	California	120,947,840
Washington	44,796,160	Oregon	60,975,300
Indian Territory	44,154,240		
Colorado	66,880,000		920,517,059
New Mexico	77,568,640		

A large portion of the Pacific coast is susceptible of culture, either with or without irrigation. The governor of Washington claims for that Territory great superiority in wheat production, and prophecies a yield in the near future three times as large as the present supply of California. The governor of Dakota estimates the area suitable for field culture, and especially suited to wheat-growing, at 40,000,000 acres. These views may prove too sanguine, but there is a good basis for some enthusiasm. The Indian Territory, though only half as large, has nearly as much more available for agricultural production. Montana, better adapted to grazing purposes, is estimated by Prof. Cyrus Thomas, the agricultural topographer of Hayden's survey, to contain 7,800,000 acres of irrigable lands. Counting but one-tenth of the inter-montane region,

which includes two States and six Territories, with four-tenths of the area of the Pacific slope on the west, and Dakota and the Indian Territory on the east, we have an aggregate of 200,000,000 acres of land, from the northern and more elevated portions of which the growth of maize is excluded, in which wheat-farming will for many years exist as a specialty, dominating all other arable culture, and at many points occupying for a time the cultivated areas almost exclusively. Thus the opportunities for expansion of the present area in wheat in the farm-lands of the older States, as yet but partially cultivated, in the wild lands not yet included in farms in the West and South, and in this fertile domain beyond the Missouri, which is six times as large as the present breadth in wheat, surpass any possible requirement of the immediate future, and assure an adequate supply of any deficiency in the world's production for many years to come without stinting the rations of our rapidly-increasing population.

In this estimate an increase in the rate of yield, as a result of more rational and scientific practice in agriculture, is not considered, as it is probable that the average yield per acre will never be largely increased until the virgin soils have been overrun by the wasteful methods of primitive wheat-growing now in vogue here as elsewhere in all countries where land is relatively cheaper than labor.

CHANGES IN THE SURPLUS PRODUCING TERRITORY AND THE MODES OF THE SHIPMENT OF WHEAT.

Question 10. Please to state your views as to the probable changes in the surplus wheat-producing territory and in the modes of shipment.

Answer. The changes of the future will be for some years in the same direction as in the past, a continued movement westward of the center of production. In the area yet to be subdued between the Missouri and the Pacific coast the proportion of the cultivated area devoted to this crop will be larger than in the territory already occupied. When all these available lands are taken up, and population threatens to press upon subsistence, fertilization, with rotation, will increase the rate of yield, as has happened in the most populous districts of Europe, and then the center of wheat production will be likely to recede slowly eastward, obedient to the impulse of improved agriculture in that portion of the country east of the Missouri, which is and ever must be superior for purposes of general agriculture, not only in extent of surface but in variety and due balance of advantages.

The changes of the past are best indicated by dividing the States into convenient groups and presenting the supply of each in bushels to each inhabitant at different periods.

Groups of States.	1849.	1859.	1869.	1877
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
New England.....	.40	.34	.28	.30
North Middle.....	5.10	3.15	3.87	3.24
South Middle.....	7.72	8.41	6.43	7.58
Southern Atlantic.....	1.69	2.96	1.83	2.84
Southern.....	.69	2.11	1.70	2.27
Ohio Valley.....	7.53	10.79	12.77	10.90
Trans-Mississippi.....	5.12	7.02	11.47	20.04
Pacific.....	2.16	15.38	27.73	27.49

During this period neither New England nor any of the northern groups have been self-supplying. The group comprising New York, New Jersey, and Pennsylvania has had barely a sufficiency only at the beginning of the period, yet it is just to say that the deficiency has ever been occasioned mainly by the growing disproportion between population and wheat production in the State of New York. The group in which Virginia is classed, with Maryland and Delaware, from similarity of crop distribution and named South Middle, has been quite uniformly self-supporting, being naturally a fine winter-wheat region, producing some of the best wheat harvested in the country. In the past few years the tendency to increased production in the South has been greater than at any former period. The only groups producing an appreciable surplus are those of the Ohio Valley, the Missouri Valley, and the Pacific Coast. With a sufficiency for home consumption thirty years ago, the supply of the country beyond the Mississippi is now nearly four times as great, and the growth of this industry on the Pacific Coast has been still more wonderful in its rapidity.

Considering absolute quantity rather than proportion per head, it is seen that the Atlantic States make a small increase in volume, amounting in twenty-eight years to 24 per cent. In the same period the States between the Alleghenies and the Mississippi show an advance of 239 per cent., while the trans-Mississippi region, including

all between the river and the ocean, have increased production from 5,306,278 bushels in 1849 to 152,860,000 bushels in 1877. The figures are as follows :

Sections.	1849.	1859.	1869.	1877.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Atlantic coast	51,657,020	53,294,137	57,476,371	64,344,800
Central belt	43,522,646	94,458,009	146,877,070	147,890,000
Trans-Mississippi	5,306,278	25,352,178	89,392,185	152,860,000
	100,485,944	173,104,924	287,745,626	365,094,800

The true rate of progress or decline is best shown by presenting the percentage of each crop grown in the several sections :

Sections.	1849.	1859.	1869.	1877.
Atlantic coast	51.4	30.7	19.9	17.6
Central belt	43.3	54.6	48.9	40.5
Trans-Mississippi	5.3	14.7	31.2	41.9
	100.0	100.0	100.0	100.0

The Atlantic Coast now retains but one-third of its former proportion. The region between the mountains and the great river, increasing its percentage at first, has since sacrificed more than this advance, and the extreme West now produces eight times its former percentage.

The surplus is now produced in five States only in the central belt, lying between the Ohio River and the lakes, and in Minnesota, Iowa, Missouri, Kansas, Nebraska, California, and Oregon. As population increases the surplus will probably diminish in the Ohio Valley, leaving to more western regions the Eastern and European supply. The Southern requirement is small, and with further revival of wheat growing would cease. The State of Nebraska, and Dakota, Washington, and other Territories are looming into prominence in the future wheat supply.

As to changes in the mode of transportation, the most obvious is a marked increase of shipments of flour in place of raw grain. The tendency in all agricultural exportation is towards concentration, reduction of bulk, and increase in value, both for economy of transportation and to secure the profits of manufacture. Flour constitutes less than three-fourths of the weight of the grain (scarcely more than two-thirds under the old modes of milling). The offal is valuable for feeding and fattening farm animals, and the manufacture makes a demand for labor and enlarges the home market for bread. Minnesota now converts a large proportion of her wheat into flour. Saint Louis has increased her manufacture in ten years from 895,154 barrels to 1,916,290. The movements of flour have also greatly increased, as the principal lake and seaport receipts show, as follows :

Ports.	1868.	1878.
	<i>Barrels.</i>	<i>Barrels.</i>
Chicago	2,192,413	3,030,582
Milwaukee	567,358	2,263,303
Buffalo	1,502,731	1,619,386
Oswego	1,170	1,894,599
New York	2,855,986	4,675,243
Boston	1,407,681	1,756,557
Philadelphia	759,366	979,380
Baltimore	868,400	1,190,867

This is an increase of 74 per cent. In lake and ocean transportation wheat is preferred to flour, on account of ease in handling by the elevator system, and perhaps from less liability to injury from dampness, so that the proportion of flour exported does not increase. The diversion of freight from canals to railroads obviates in part this disability, and may aid in increasing the proportion of wheat manufactured in the region of its production. The recent improvements in milling increase the economy of manufacture, and the resultant profit stimulates competition for local supplies, causing a division of profits between the millers and the farmers. This is notably the result of mill improvement and competition of millers in Minnesota, and is in accordance with a law of enlightened humanity which dominates our industrial progress.

APPENDIX No. 20.

STATEMENT SHOWING THE VALUE OF THE MERCHANDISE TRANSPORTED ON THE PENNSYLVANIA RAILROAD; PREPARED BY MR. JOHN C. SIMS, JR., ASSISTANT SECRETARY.

'PHILADELPHIA, April 30, 1878.

DEAR SIR: In accordance with the request contained in your letter of January 21, 1878, I send you herewith "information in regard to the tonnage and value of the freight traffic of the Pennsylvania Railroad, in accordance with the terms of the accompanying schedule."

The accounts of the comptroller of the Pennsylvania Railroad Company, which have formed the basis of my calculations, are so kept that each division of the road is separate and independent of the others. I have, therefore, selected the Pennsylvania Railroad division, or main line, with its branches, extending from Philadelphia to Pittsburgh; if I had added to it the New York division it would have taken from the accuracy of the results, since a large part of the tonnage is counted separately on each of these divisions.

I beg to state that it has been extremely difficult to properly divide the through tonnage east and west into four classes, but I believe the division I have made affords at least an approximation to correctness.

Yours, respectfully,

JNO. C. SIMS, JR.,
233 South Fourth Street, Philadelphia.

Hon. JOHN SHERMAN,
Secretary of the Treasury, Washington, D. C.

Information concerning the tonnage and value of tonnage of the traffic of the Pennsylvania Railroad, main line and its branches (Philadelphia to Pittsburgh), for the year 1876, furnished on the request of Hon. John Sherman, Secretary of the Treasury.

		Quantity.	Value.
		Tons.	Dollars.
1.	Total number of tons of freight transported on the Pennsylvania Railroad Division.....	9,922,911	
2.	Average value per ton of same.....		56 53
3.	Total number of tons of freight transported eastward.....	7,118,962	
4.	Average value per ton of same.....		
5.	Total number of tons of freight transported westward.....	2,808,929	
6.	Average value per ton of same.....		
7.	Total number of tons of through freight between Pittsburgh and Philadelphia and Pittsburgh and New York, transported eastward.....	1,822,276	
8.	Average value per ton of same.....		140 00
9.	Total number of tons of through freight between Philadelphia and Pittsburgh and New York and Pittsburgh, transported westward.....	293,263	
10.	Average value per ton of same.....		341 00
11 nd 12.	Total number of tons first-class through freight transported eastward.....	33,470	608 00
	Average value per ton of same.....		
	Total number of tons second-class through freight transported eastward.....	62,125	282 00
	Average value per ton of same.....		
	Total number of tons third-class through freight transported eastward.....	324,049	126 00
	Average value per ton of same.....		
	Total number of tons fourth-class through freight transported eastward.....	902,632	111 00
	Average value per ton of same.....		
	Total number of tons first-class through freight transported westward.....	65,793	775 00
	Average value per ton of same.....		
	Total number of tons second-class through freight transported westward.....	122,258	204 00
	Average value per ton of same.....		
13 and 14.	Total number of tons third-class through freight transported westward.....	20,975	175 00
15.	Average value per ton of same.....		
	Total number of tons fourth-class through freight transported westward.....	84,247	139 00
	Average value per ton of same.....		
16.	Anthracite coal transported.....	788,588	
	Bituminous coal transported.....	2,144,211	
	Average value per ton of same.....		123 00

JNO. C. SIMS, JR., 233 South Fourth Street, Philadelphia.

The Pennsylvania Railroad division embraces the following roads:

	Miles.
Pennsylvania Railroad, main line	358
Columbia Bridge	1
York Branch	13
Hollidaysburg Branch	55
Indiana Branch	19
East Brandywine and Waynesburg Railroad	18
Bald Eagle Valley Railroad	52
Mifflin and Centre County Railroad	13
Sunbury and Lewistown Railway	45
Tyrone and Clearfield Railway	51
Ebensburg and Cresson Railroad	11
Western Pennsylvania Railroad	85
Bedford and Bridgeport Railroad	49
Southwest Pennsylvania Railway	38
Pennsylvania and Delaware Railway	38
Lewisburg, Centre and Spruce Creek Railroad	19
Danville, Hazleton and Wilkesbarre Railroad	44
Hanover and York Railroad	18
Littlestown Railroad	9
Frederick and Pennsylvania Line Railroad	27

Total Pennsylvania Railroad division 963

Weights and estimated values of articles transported, during the year 1876, over the Pennsylvania Railroad (Philadelphia to Pittsburgh) and branches, including the Lewisburg, Centre and Spruce Creek Railroad, and the Danville, Hazleton and Wilkesbarre Railroad.

Articles.	Pounds.	Tons of 2,000 pounds.	Value per ton.	Total value.
1. Agricultural implements	10,842,938	5,172	\$282 80	\$1,462,641
2. Agricultural productions	160,453,160	80,227	*40 00	3,209,080
3. Bark and sumac	90,513,301	45,256	40 08	1,813,981
4. Bones	13,113,709	6,557	22 00	144,254
5. Boots, shoes, hats, &c.	12,742,551	6,371	2,040 50	13,000,025
6. Books and stationery	4,796,082	2,398	558 68	1,339,687
7. Brick	55,619,546	27,810	9 10	250,341
8. Butter and eggs	68,861,478	34,431	341 50	11,758,136
9. Brown sheetings and bagging	4,068,807	2,034	520 00	1,062,880
10. Carriages	3,676,558	1,838	1,000 00	2,940,800
11. Cedarware	189,766	95	*200 00	12,000
12. Confectionery and foreign fruits	5,931,060	2,966	165 88	492,000
13. Coal-oil	1,217,753,613	608,876	32 25	19,696,351
14. Coal anthracite	1,577,173,480	788,589	1 67	1,316,240
15. Coal bituminous	6,286,422,417	3,143,211	1 12	3,561,555
16. Coke, slack, and charcoal	1,810,185,075	905,092	2 55	2,368,000
17. Coffee	34,582,832	17,296	370 00	6,399,520
18. Cotton	61,997,649	30,954	240 00	7,428,960
19. Copper, tin, and lead	44,840,841	22,420	200 00	4,484,000
20. Dry goods	49,610,945	24,805	1,200 00	29,766,000
21. Drugs, medicines, and dyestuffs	91,467,099	45,734	*500 00	22,872,000
22. Earthenware	20,980,018	10,490	90 00	944,100
23. Empty barrels	32,280,882	16,140	*60 00	968,400
24. Fresh meats, poultry, and fish	15,291,086	7,601	200 00	1,520,200
25. Flour	479,928,435	239,964	65 00	15,597,660
26. Feathers, furs, and skins	2,664,816	1,332	*2,000 00	2,664,000
27. Furniture and oil-cloth	41,142,537	20,571	350 00	7,199,850
28. Glass and glassware	27,668,127	13,834	120 00	1,660,420
29. Green and dried fruits	68,583,272	34,292	200 00	6,858,400
30. Grass and other seeds	20,881,966	10,441	120 00	1,252,920
31. Grain of all kinds	1,819,463,815	909,732	45 60	40,937,940
32. Groceries (except coffee)	281,398,315	140,699	240 00	33,768,660
33. Guano, phosphate of lime, and other fertilizers	33,807,454	16,904	16 70	282,286
34. Hardware	17,018,917	8,509	480 00	4,106,410
35. Hides and hair	42,998,500	21,447	120 00	2,573,640
36. Hemp and cordage	14,176,181	7,088	200 00	1,417,600
37. Iron, rolled, hammered, &c.	320,884,579	160,417	46 80	7,475,432
38. Iron, blooms and pig	612,214,240	306,107	21 80	6,673,132
39. Iron, railroad	253,930,080	126,965	46 00	5,840,390
40. Iron ore	562,000,411	281,000	1 50	444,502
41. Lime and plaster	66,088,390	33,044	8 50	280,874
42. Live stock	726,198,062	363,093	130 00	47,200,790
43. Leather	82,680,025	41,340	580 00	23,976,000

Weights and estimated values of articles transported, during the year 1876, &c.—Continued.

Articles.	Pounds.	Tons of 2,000 pounds.	Value per ton.	Total value.
44. Lard, lard-oil, and tallow	104,189,855	52,095	\$200 00	\$10,419,000
45. Lumber and timber	743,608,033	371,804	15 04	5,591,932
46. Cord-wood	4,295,175	2,148	1 00	2,148
47. Cross-ties	23,750,665	11,875	6 40	76,000
48. Telegraph poles	1,188,900	594	4 40	2,614
49. Shingles, shooks, and staves	99,999,741	34,985	20 00	699,700
50. Hoops and hoop-poles	11,879,686	5,940	5 42	32,185
51. Machinery and castings	116,623,542	58,312	220 00	12,828,640
52. Manufactures	23,665,171	11,833	*500 00	5,916,500
53. Marble and cement	21,952,718	10,976	46 75	513,128
54. Malt and malt liquors	30,681,506	15,341	80 70	1,238,019
55. Marketing	9,698,510	4,849	*200 00	969,800
56. Merchandise	219,056,690	109,528	*500 00	54,784,000
57. Military stores (United States Government) ..	1,738,126	868	*260 00	225,630
58. Miscellaneous	53,500,600	26,750	*500 00	13,375,000
59. Nails and spikes	42,020,995	21,010	62 00	1,302,620
60. Oil (except coal-oil)	12,755,386	6,378	169 00	1,081,708
61. Ores (other than iron)	1,604,319	802	5 00	4,016
62. Oysters	6,012,597	3,006	40 00	120,240
63. Paper and rags	37,212,540	18,606	100 00	1,860,600
64. Pot, pearl, and soda ash	31,083,448	15,542	45 00	699,290
65. Powder	4,163,096	2,082	300 00	624,600
66. Queensware	3,798,319	1,899	144 40	274,215
67. Salt	33,817,742	16,909	13 00	220,822
68. Salt meats and fish	287,554,668	143,777	197 20	28,352,824
69. Strawboards	9,618,769	4,809	51 40	247,182
70. Stone, sand, clay, and cinders	437,863,615	218,933	10 00	2,189,330
71. Soap and candles	12,805,538	6,403	213 80	1,368,261
72. Tobacco	104,983,905	52,492	800 00	41,998,600
73. Tar, pitch, and rosin	8,279,388	4,140	16 90	69,568
74. Wines and liquors	43,551,447	21,776	660 00	14,373,160
75. Whisky and alcohol	38,407,038	19,204	300 00	5,761,200
76. Wood, in shape	30,775,196	15,388	*50 00	769,400
77. Wool and woolen yarn	34,503,728	17,252	1,000 00	17,252,000
Total	19,845,822,757	9,922,911		560,903,462

* Estimated.

THE PENNSYLVANIA RAILROAD COMPANY,
OFFICE 233 SOUTH FOURTH STREET,
Philadelphia, September 9, 1878.

1. Express freights were *not* included in my statement of the value, &c., of freight transported over this road in 1876.

2. I inclose herewith statements of express business, Philadelphia to Pittsburgh and Pittsburgh to Philadelphia, for the months of January and July, 1878.

EXPRESS FREIGHTS.

For the month of January, 1878.

	Pounds.	Cars.
Philadelphia to Pittsburgh	51,243	135
Philadelphia to Harrisburg	792,253	
Johnstown accommodation	152,309	27
Columbia accommodation	42,708	
Lancaster accommodation	72,469	
Pittsburgh to Philadelphia	64,954	
Pittsburgh to Harrisburg (Baltimore business)	640,297	126
Harrisburg to Pittsburgh (Baltimore business)	37,784	
	35,973	
	1,869,990	

REPORTS OF EXPERTS.

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For the month of July, 1878.

	Pounds.	Cara.
Philadelphia to Pittsburgh.....	750, 153	160
Philadelphia to Harrisburg.....	187, 558	27
Johnstown accommodation	72, 041	
Columbia accommodation.....	61, 120	
Lancaster accommodation	29, 486	
Pittsburgh to Philadelphia.....	298, 170	116
Pittsburgh to Harrisburg (Baltimore business) ..	44, 707	
Harrisburg to Pittsburgh (Baltimore business) ..	143, 480	
	<hr/>	
	1, 586, 715	

The Central Express Company does part of the local business and pays us by the day, so that we cannot get at their figures.

JNO. C. SIMS, JR.

APPENDIX No. 21.

RULES AND FORM OF ACCOUNTS RECOMMENDED BY THE CONVENTION OF RAILROAD COMMISSIONERS HELD AT SARATOGA SPRINGS, NEW YORK, JUNE 10, 1879.

RULES, ETC.

I.

All liabilities (including interest accrued on funded debt) shall be entered upon the books in the month when they are incurred, without reference to date of payment.

II.

Expenses shall be charged each month with such supplies, materials, &c., as have been *used* during that month, without reference to the time when they were purchased or paid for.

III.

No expenditure shall be charged to property accounts, except it be for actual increase in construction, equipments, or other property, unless it is made on old work in such a way as to clearly increase the value of the property over and above the cost of renewing the original structures, &c. In such cases only the amount of increased cost shall be charged, and the amount allowed on account of the old work shall be stated.

IV.

Mileage of passenger and freight trains shall include only the miles shown to be run by distances between stations; allowances made to passenger or freight trains for switching, and all mileage of switching engines computed on a basis of eight miles per hour for the time of actual service, shall be stated separately.

V.

Season-ticket passengers shall be computed on the basis of twelve (12) passengers per week for the time of each ticket.

VI.

Local traffic shall include all passengers carried on local tickets, and all freight carried at local tariff or special local rates. All other traffic shall be considered through.

GENERAL EXHIBIT.

Total income.....	.....
Total expense, including taxes.....	.....
Net income.....	.....
Interest on funded debt.....	.....
Interest on unfunded debt.....	.....
Rentals.....	.....
Balance applicable to dividends.....	.....
Dividends declared (per cent.).....	.....
Balance for the year.....	.....
Balance (profit and loss) last year.....	.....
Add or deduct various entries made during the year not included above (specifying same).	
Balance (profit and loss) carried forward to next year.....	.....

CHARGES AND CREDITS TO PROPERTY DURING THE YEAR.

Construction and equipment (specifying same).....	.....
Other charges (specifying same).....	.....
Total charges.....	.....
Property sold or reduced in value (specifying same).....
Net addition (or reduction) for the year.....

REPORTS OF EXPERTS.

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ANALYSIS OF EARNINGS AND EXPENSES.

Earnings :

From local passengers
Through passengers
Express and extra baggage
Mails
Other sources, passenger department
Total earnings passenger department
Local freight
Through freight
Other sources, freight department
Total earnings freight department
Total transportation earnings
Rents for use of road
Income from other sources (specifying same)

Total income from all sources

Expenses :

Salaries, general officers and clerks
Law expenses
Insurance
Stationery and printing
Outside agencies and advertising
Contingencies
Repairs, bridges (including culverts and cattle guards)
Repairs, buildings
Repairs, fences, road-crossings, and signs
Renewal rails
Renewal ties
Repairs, roadway and track
Repairs, locomotives
Fuel for locomotives
Water supply
Oil and waste
Locomotive service
Repairs, passenger cars
Passenger-train service
Passenger-train supplies
Mileage, passenger-cars (debit balance)
Repairs, freight cars
Freight-train service
Freight-train supplies
Mileage, freight cars (debit balance)
Telegraph expenses (maintenance and operating)
Damage and loss of freight and baggage
Damage to property and cattle
Personal injuries
Agents and station service
Station supplies
Total operating expenses
Taxes

Total operating expenses and taxes

ASSETS AND LIABILITIES.

Assets :

Construction account
Equipment account
Other investments (specifying same)
Cash items:
Cash
Bills receivable
Due from agents and companies
Other assets:
Materials and supplies
Sinking funds
Debit balances

Total assets

Liabilities :

Capital stock	
Funded debt	
Unfunded debt, as follows:	
Interest unpaid	
Dividends unpaid	
Notes payable	
Vouchers and accounts	
Other liabilities	
Profit and loss or income accounts	

Total liabilities

PRESENT OR CONTINGENT LIABILITIES NOT INCLUDED IN BALANCE-SHEET.

Bonds guaranteed by this company or a lien on its road (specifying same).	
Overdue interest on same	
Other liabilities (specifying same)	

MILEAGE, TRAFFIC, ETC.

Mileage, passenger trains	
Freight trains	
Switching trains*	
Other trains	

Total train mileage

Miles run by passenger, mail, and baggage cars (north or east) †	
Miles run by passenger, mail, and baggage cars (south or west) †	
Miles run by freight cars (north or east) †	
Miles run by freight cars (south or west) †	
Number of season-ticket passengers	
Number of local passengers (including season)	
Number of through passengers	
Total number of passengers carried	
Mileage of local passengers (north or east) †	
Mileage of local passengers (south or west) †	
Mileage of through passengers (north or east) †	
Mileage of through passengers (south or west) †	

Total passenger mileage

Number tons local freight carried	
Number tons through freight carried	

Total tons freight carried

Mileage of local tonnage (north or east) †	
Mileage of local tonnage (south or west)	
Mileage of through tonnage (north or east) †	
Mileage of through tonnage (south or west)	

Total freight mileage

Average weight of passenger trains	
Average number of cars in passenger trains	
Average weight of freight trains	
Average number of cars in train	
Average number of persons employed	
Length of road, branches, sidings, &c	
Names of officers and directors	
Corporate name of company	

* If any allowance is made to passenger or freight trains for switching, state the amount allowed to each here. Passenger trains, — miles. Freight trains, — miles.

† This division is not compulsory, and need only be given by companies so keeping their accounts.

APPENDIX No. 22.

THE NEGOTIATION OF BILLS OF LADING AND OTHER COMMERCIAL INSTRUMENTS.

JANUARY 29, 1879.—Committed to the Committee of the Whole House on the state of the Union and ordered to be printed.

Mr. Bliss, from the Committee on Commerce, submitted the following report (to accompany bill H. R. 3255):

The Committee on Commerce, to whom was referred the bill (H. R. 3255) to facilitate the negotiation of bills of lading and other commercial instruments, and to punish fraud therein, respectfully report:

That they have had under consideration the above-mentioned bill and recommend its passage.

The bill is the outgrowth of the sentiment of the merchants in our commercial centers. The facility for fraud in obtaining advances or credit by bills of exchange, or otherwise, on bills of lading, warehouse receipts, and kindred instruments, is now so great as to require a remedy. Chambers of commerce and boards of trade in various States have taken action recommending the passage of such a law as proposed in this bill; and the State of Maryland, in 1876, passed a very similar act intended to confer the same benefits within its jurisdiction. In New York, the "Factors act," passed in 1830, and amended in 1858 and 1866, attempted the same thing; but its operation is partial and far from satisfactory.

The objection that the question is one affecting commerce between the States and with foreign nations, lies to State enactments on the subject; and it is every way preferable that Congress should pass an act which may apply throughout the country, than that we should be left to laws by thirty-eight different States, all relating to the same subject, but doubtless discordant, and perhaps ambiguous, and necessarily limited to their own boundaries.

A number of cases decided in the courts will illustrate the evils complained of.

The case of *Dows vs. National Exchange Bank of Milwaukee*, reported in the first volume of *Otto's United States Supreme Court Reports*, is in point. There *Dows & Co.*, in New York, were consignees of a cargo of wheat shipped to them by reputable merchants in Oswego, who sent them the bills of lading therefor, and drew upon them on account of an advance on the wheat. *Dows & Co.* paid the advance, received and offered the wheat for sale, all in the regular and usual course of business. But the wheat was replevied by the Milwaukee bank, which claimed to have made an advance on it there, and had bills of lading for it to Oswego, where it was to be transhipped to New York; the consignees in Oswego were *Smith & Co.*, selected by the bank or its agents, and intrusted with the wheat. *Smith & Co.* ought to have sent the wheat to another address, and not to have drawn upon it; but, in violation of their duty to the bank, *Smith & Co.* sent it to *Dows & Co.*, and drew against it, and they advanced upon it without any notice of any equities in favor of the bank. It seems only just that the fraud perpetrated by *Smith & Co.* should fall upon those who trusted the wheat in their hands, who caused to be delivered to them property having no ear-mark or apparent lien, and gave them the means to deceive others. But, as the law has heretofore stood, the court had in effect to decree that *Dows & Co.* should stand this loss instead of the bank which had trusted the wheat to *Smith & Co.*

The case of the *Bank of Toledo vs. Shaw* (61 N. Y., 304), where a similar fraud was perpetrated upon an incorporated banking company by means of a warehouse receipt, led its managers to go out of business and wind it up, as they thought there was too great insecurity in making advances to warrant its continuance.

The case of *Hentz vs. Steamer Idaho*, was one where cotton was replevied in Liverpool and taken away from the bankers who had in regular course of business accepted bills of exchange drawn against it without notice of any prior equities. And the United States Supreme Court were compelled to uphold this procedure.

The bill throws proper safeguards around commercial transactions of this kind, preserves all equities with notice, and punishes fraud, and in our opinion ought to become a law.

IN THE HOUSE OF REPRESENTATIVES.

FEBRUARY 11, 1878.—Read twice, referred to the Committee on Commerce, and ordered to be printed.

Mr. ABRAM S. HEWITT, on leave, introduced the following bill:

A BILL to facilitate the negotiation of bills of lading and other commercial instruments, and to punish fraud therein.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever any party, in the course of any commercial transaction between the United States and any foreign nation, or between any of the United States, shall deliver to any special or common carrier, by land or water, or both, or to any warehouseman or other custodian, any personal property whatever, and shall take therefor any bill of lading, shipping-receipt, warehouse-receipt, agreement, certificate, or other voucher, in which instrument it shall be stated that such property is deliverable to the order of any party whatever named therein, the absolute title in full to and the right of possession of such instrument, and to and of all such personal property mentioned therein, shall be transferable by the indorsement of the party mentioned therein (and subsequent indorsers) and the delivery of such instrument; and, upon such indorsement and delivery, such title and right of possession shall immediately vest in the transferee, subject only to any liens and conditions which may be mentioned in said instrument: *Provided*, That if any such instrument shall state that it is not negotiable, then this section shall not apply to it, nor to the property mentioned therein: *And provided further*, That if actual notice of other equities shall be received by the transferee before settlement or payment, he shall be bound by such notice.

SEC. 2. That this act shall be construed liberally for the purpose of securing negotiability to all the instruments mentioned, and the transfer of ownership of the goods, wares, and merchandise, or other personal property mentioned in such instruments.

SEC. 3. That if any person shall knowingly make, issue, indorse, or transfer any instrument intended by this act, when the property mentioned therein is not situated as therein mentioned, such person, in addition to any and all other penalties now prescribed by law, shall be guilty of a misdemeanor, and punished according to law. No party dealing in good faith with any such instrument shall be liable as indorser thereon after the same shall have been transferred and accepted by the subsequent transferee.

APPENDIX No. 23.

Statement showing the tonnage moved on the New York Central and the Erie Railway, and on the canals of the State of New York, during the last twenty years.

Years.	On the New York Central Railroad.	On the Erie Railway.	Total tonnage by rail.	Tonnage by canal.	Total tonnage by rail and canal.	Per ct. carried on the canals.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	
1859.....	834,319	868,079	1,702,392	3,781,684	5,485,076	69
1860.....	1,028,183	1,139,554	2,167,737	4,050,214	6,217,951	59
1861.....	1,167,302	1,253,418	2,420,720	4,507,635	6,928,355	65
1862.....	1,387,433	1,632,955	3,020,388	5,598,785	8,619,173	65
1863.....	1,449,604	1,815,096	3,264,700	5,557,692	8,822,392	63
1864.....	1,557,148	2,170,798	3,727,946	4,852,941	8,580,887	56
1865.....	1,275,299	2,234,350	3,509,649	4,729,654	8,239,303	57
1866.....	1,662,197	3,242,792	4,844,989	5,775,220	10,620,209	54
1867.....	1,667,928	3,484,546	5,152,472	5,688,325	10,840,797	52
1868.....	1,846,599	3,908,243	5,754,842	6,442,225	12,197,067	53
1869.....	2,281,885	4,312,209	6,594,094	5,859,080	12,453,174	47
1870.....	4,122,000	4,852,505	8,974,505	6,173,769	15,148,274	40
1871.....	4,532,056	4,844,208	9,376,264	6,407,888	15,784,152	40
1872.....	4,393,965	5,564,274	9,958,239	6,673,370	16,631,609	35
1873.....	5,522,724	6,312,702	11,835,426	6,364,782	18,200,208	32
1874.....	6,114,678	6,364,276	12,478,954	5,804,598	18,283,552	28
1875.....	6,001,954	6,239,946	12,241,900	4,859,858	17,101,758	25
1876.....	6,803,680	5,972,818	12,776,498	4,172,129	16,948,627	28
1877.....	6,351,356	6,182,451	12,533,807	4,955,963	17,489,770	28
1878.....	8,175,535	6,150,468	14,326,003	5,171,320	19,497,323	27

APPENDIX No. 24.

Tonnage on New York State canals, New York Central Railroad, Erie Railway, and receipts per ton per mile on each from 1860 to 1878.

Year.	New York State canals.		New York Central Railroad.		Erie Railway.	
	Moved one mile.	Average receipts per ton per mile.	Moved one mile.	Average receipts per ton per mile.	Moved one mile.	Average receipts per ton per mile.
	<i>Tons.</i>	<i>Cents.</i>	<i>Tons.</i>	<i>Cents.</i>	<i>Tons.</i>	<i>Cents.</i>
1860.....	809,624,596	9.94	199,231,392	2.06	214,064,395	1.84
1861.....	863,623,507	1.08	237,392,974	1.96	251,850,127	1.73
1862.....	1,123,548,430	9.59	296,963,492	2.22	351,092,285	1.89
1863.....	1,034,130,023	8.76	312,195,795	2.40	408,670,861	2.09
1864.....	871,335,150	0.15	314,681,410	2.75	422,013,644	2.31
1865.....	843,915,779	1.10	264,993,626	3.31	388,557,213	2.76
1866.....	1,012,448,034	1.00	331,075,547	2.92	478,485,772	2.45
1867.....	958,362,953	0.90	362,180,606	2.53	549,888,422	2.94
1868.....	1,033,751,268	0.88	368,199,786	2.59	595,969,225	1.92
1869.....	919,153,611	0.92	474,419,726	3.20	817,829,190	1.60
1870.....	904,351,572	0.83	769,087,777	1.86	868,862,718	1.37
1871.....	1,050,104,125	1.02	888,327,865	1.65	897,446,728	1.47
1872.....	1,048,675,911	1.02	1,020,908,885	1.69	950,708,903	1.32
1873.....	1,057,711,089	0.88	1,246,650,063	1.57	1,032,983,809	1.45
1874.....	938,774,141	0.73	1,391,560,707	1.47	1,047,420,238	1.21
1875.....	727,597,364	0.66	1,404,908,029	1.27	1,016,618,050	1.21
1876.....	570,969,064	0.68	1,674,447,055	1.05	1,040,481,921	1.67
1877.....	857,305,563	0.57	1,619,948,685	1.02	1,114,583,220	0.96
1878.....	937,789,464	0.42	2,084,355,368	0.91	1,224,764,438	0.97

APPENDIX No. 25.

Tonnage entered from sea at Montreal from 1853 to 1878, inclusive.

Year ended December 31—	Tons.	Year ended June 30—	Tons.
1853.....	59,712	1866.....	172,362
1854.....	72,805	1867.....	162,411
1855.....	48,139	1868.....	198,553
1856.....	65,491	1869.....	168,829
1857.....	65,712	1870.....	236,125
1858.....	70,183	1871.....	247,313
1859.....	85,319	1872.....	211,567
1860.....	118,216	1873.....	267,455
1861.....	248,351	1874.....	266,722
1862.....	259,901	1875.....	297,367
1863.....	195,809	1876.....	265,066
1864*.....	46,999	1877.....	278,137
1865.....	133,286	1878.....	268,367

* Half year ended June 30

The above figures were furnished by commissioner of customs of Canada.

APPENDIX No. 26.

Tonnage of American and foreign vessels entered at the principal and other seaports of the United States from foreign countries, from 1853 to 1879, inclusive.

Year ended June 30—	Portland.	Boston.	New York.	Philadel- phia.	Baltimore.	Charles- ton.	Savann- nah.	Mobile.	New Or- leans.	Galves- ton.	San Fran- cisco.	All other seaports.	Total.
1853	Tons. 62,622	Tons. 582,400	Tons. 1,755,521	Tons. 183,944	Tons. 119,189	Tons. 94,745	Tons. 52,175	Tons. 79,822	Tons. 511,878	Tons. 7,575	Tons. 252,820	Tons. 454,101	Tons. 4,156,983
1854	43,027	653,443	1,840,007	191,673	156,448	86,618	53,785	86,321	492,434	4,759	298,962	522,185	4,342,662
1855	67,918	707,924	1,735,907	185,975	165,127	86,833	47,062	69,892	435,863	8,386	172,947	492,457	4,178,226
1856	53,037	683,185	1,681,659	178,178	153,323	131,542	70,082	160,249	463,067	10,846	168,302	517,538	4,464,038
1857	69,146	714,821	2,035,648	189,102	163,381	126,126	108,685	197,484	612,286	7,511	149,242	559,494	4,842,927
1858	74,921	695,442	1,694,219	156,671	156,810	126,573	115,832	117,832	583,776	8,556	147,175	541,910	4,338,283
1859	89,876	724,167	1,890,144	180,421	189,992	126,764	86,524	181,600	659,068	24,326	221,439	575,695	4,913,081
1860	115,275	718,587	1,973,812	185,162	186,417	126,411	92,048	160,909	632,398	32,263	225,001	541,311	5,000,194
1861	135,907	771,948	2,320,927	183,408	225,110	56,371	10,096	67,646	68,968	8,228	205,002	504,911	4,559,087
1862	143,359	619,485	2,596,749	171,882	123,688	.....	.....	.....	.....	.....	231,688	391,485	4,191,296
1863	138,532	639,828	2,564,858	188,938	102,752	.....	.....	.....	.....	.....	256,684	202,610	4,205,420
1864	149,858	681,189	2,382,192	194,443	126,565	.....	.....	.....	.....	.....	259,558	312,906	4,167,481
1865	134,447	655,085	2,075,477	159,579	88,466	.....	.....	.....	.....	.....	821,253	877,497	5,008,487
1866	151,625	725,424	2,697,325	222,962	132,886	.....	.....	.....	.....	.....	838,130	441,341	5,260,386
1867	147,729	781,980	2,754,005	296,735	203,618	.....	.....	.....	.....	.....	810,896	417,918	5,671,521
1868	170,641	642,478	2,865,252	278,440	216,727	.....	.....	.....	.....	.....	413,673	473,209	6,081,980
1869	194,805	778,871	3,101,691	292,565	225,302	.....	.....	.....	.....	.....	443,735	568,929	6,270,189
1870	175,175	798,927	3,093,186	300,006	272,390	.....	.....	.....	.....	.....	388,963	616,918	6,994,197
1871	161,177	836,104	3,413,436	269,616	315,734	.....	.....	.....	.....	.....	353,463	741,837	7,769,866
1872	173,457	891,486	3,980,339	417,911	368,136	.....	.....	.....	.....	.....	423,572	908,064	8,394,749
1873	215,340	819,819	4,211,624	496,817	397,167	.....	.....	.....	.....	.....	554,191	1,120,792	10,009,655
1874	213,351	729,769	5,049,618	657,045	556,599	.....	.....	.....	.....	.....	720,438	963,434	9,143,138
1875	244,565	708,678	4,421,074	562,286	501,314	.....	.....	.....	.....	.....	621,382	1,208,307	9,715,904
1876	200,568	687,788	4,467,139	687,857	697,817	.....	.....	.....	.....	.....	84,536	1,208,823	10,406,488
1877	184,104	752,391	4,673,300	810,683	921,118	.....	.....	.....	.....	.....	724,508	1,276,020	11,530,527
1878	133,467	858,102	5,545,026	853,027	951,521	.....	.....	.....	.....	.....	624,040	1,282,649	13,768,137
1879	109,994	1,137,653	6,661,625	1,315,649	1,374,554	.....	.....	.....	.....	.....	639,536	1,282,649	13,768,137

APPENDIX No. 27.

Value of exports of domestic merchandise and specie at Boston, New York, Philadelphia, Baltimore, New Orleans, and San Francisco, 1860 to 1879, inclusive.

Year ended June 30—	Boston.	New York.	Philadelphia.	Baltimore.	New Orleans.	San Francisco.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1860.....	13,530,770	120,630,955	5,512,755	8,804,606	107,812,580	7,388,394
1861.....	12,947,276	137,379,956	9,865,051	12,940,625	6,825,357	10,414,468
1862.....	12,183,046	152,377,961	11,054,630	8,375,303		11,705,216
1863.....	19,150,215	221,917,978	12,236,197	11,013,871	5,768,514	9,944,114
1864.....	15,240,097	211,237,222	10,166,098	8,741,755	4,417,693	48,196,072
1865.....	19,219,499	219,379,873	10,978,603	11,794,546	† 8,259,882	† 30,251,123
1866.....	18,205,065	264,510,247	17,132,881	10,804,012	96,765,083	27,226,419
1867.....	17,298,307	207,382,457	16,585,132	10,995,348	82,965,294	23,712,255
1868.....	15,690,873	236,031,239	14,384,761	13,857,391	58,538,524	23,790,164
1869.....	13,118,827	185,384,264	14,585,173	13,657,580	75,131,704	27,540,018
1870.....	12,251,267	209,972,491	16,903,072	14,380,248	† 107,656,042	32,186,021
1871.....	12,961,291	285,530,775	17,903,027	15,037,855	98,958,081	20,791,414
1872.....	21,443,154	270,413,674	20,982,876	18,325,321	89,501,149	26,243,061
1873.....	27,038,925	313,129,963	24,203,125	19,944,177	104,329,965	38,716,497
1874.....	28,335,627	340,360,269	33,098,905	27,513,111	93,250,299	33,563,846
1875.....	29,187,165	329,201,913	28,588,019	27,515,657	71,461,272	28,949,846
1876.....	36,041,892	294,705,902	40,254,075	31,216,807	83,897,691	28,667,564
1877.....	42,748,595	300,968,581	45,524,946	39,206,274	70,186,543	43,488,473
1878.....	46,542,044	338,992,748	44,509,119	45,492,527	85,568,466	35,392,703
1879.....	48,100,019	338,817,546	47,013,751	57,478,495	63,794,426	35,548,417

*Includes values of domestic exports from all other ports of California.

†The values of exports of domestic commodities from the district of New Orleans for the first and second quarters of 1865 are included in value of exports from San Francisco.

APPENDIX No. 28.

Imports of merchandise and specie at Boston, New York, Philadelphia, Baltimore, New Orleans, and San Francisco, 1860 to 1879, inclusive.

Year ended June 30—	Boston.	New York.	Philadelphia.	Baltimore.	New Orleans.	San Francisco.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1860.....	39,366,560	233,692,941	14,629,801	9,784,773	22,922,773	9,577,821
1861.....	44,014,151	222,966,274	12,625,448	9,449,105	11,960,869	8,506,546
1862.....	23,957,621	142,215,636	5,817,190	3,096,620		8,308,224
1863.....	27,083,272	177,254,415	7,392,785	4,484,399	1,425,567	10,692,449
1864.....	30,263,853	229,506,499	9,141,672	5,835,503	1,483,092	15,065,473
1865.....	24,540,494	154,139,409	7,319,520	4,816,454	1,475,657	20,294,466
1866.....	42,650,884	302,505,719	13,167,536	8,155,991	8,710,220	15,568,416
1867.....	45,280,555	277,469,510	15,849,480	12,209,509	11,142,249	18,064,911
1868.....	37,039,736	242,580,659	14,527,783	12,930,733	11,396,858	19,503,897
1869.....	44,636,967	295,117,682	15,967,556	15,963,082	11,414,993	18,068,001
1870.....	47,524,845	293,980,006	14,500,797	19,512,468	14,903,754	21,934,160
1871.....	53,652,225	357,909,770	17,728,006	24,672,871	19,427,288	20,364,867
1872.....	70,398,185	418,515,829	20,383,853	28,896,305	18,542,186	33,339,391
1873.....	68,063,307	428,321,427	25,393,150	29,287,603	19,923,344	33,432,944
1874.....	52,212,403	395,133,622	26,447,637	29,302,138	14,533,994	32,246,229
1875.....	51,962,226	368,637,580	24,236,387	27,768,992	12,356,487	29,697,438
1876.....	37,413,623	311,712,910	22,471,516	23,340,629	11,602,893	34,068,451
1877.....	42,275,125	330,081,959	19,673,949	22,827,928	9,523,459	36,946,257
1878.....	40,350,090	313,179,049	19,333,521	16,938,638	11,253,256	32,582,513
1879.....	40,516,981	314,115,362	24,377,271	14,042,768	7,220,597	35,646,879

*Includes New Orleans for the quarter ending June 30, 1865.

APPENDIX No. 29.

Exports of animals, breadstuffs, and provisions, of domestic production, from the ports of New York, Boston, Philadelphia, Baltimore, and New Orleans, during the year ended June 30, 1879.

Articles.	New York.		Boston.		Philadelphia.		Baltimore.		New Orleans.	
	Quantity.	Dollars.	Quantity.	Dollars.	Quantity.	Dollars.	Quantity.	Dollars.	Quantity.	Dollars.
Animals, living:										
Hogs.....number.....	8,502	28,317	18,425	190,301	2,444	24,677	2,901			
Horned cattle.....do.....	27,210	2,940,997	35,968	3,515,069	7,005	595,896	3,961		34	6,980
Horses.....do.....	2,737	639,282	96	17,920	30	8,917	87		2	200
Mules.....do.....	3,273	462,911	1	508,076			75			
Sheep.....do.....	45,226	354,357	59,145	508,076	5,614	41,063	2,918			45
All other, and fowls.				1,172		41,063				
Bread and breadstuffs:										
Barley.....bushels.....	88,854	47,062	4,566	4,601					13	32
Bread and biscuit.....pounds.....	11,311,456	472,129	670,224	34,074			1,313,767	53,678	45,410	2,614
Indian corn.....bushels.....	30,961,635	15,673,619	8,153,023	4,025,478	10,426,531	7,068,885	19,004,017	8,509,894	8,966,901	1,705,971
Indian corn meal.....barrels.....	172,425	478,619	112,670	274,866	23,428	61,828	15,430	41,273	1,337	3,999
Oats.....bushels.....	2,902,701	831,241	67,027	24,965	37,173	14,604	81,960	23,241	37,646	12,430
Rye.....do.....	3,963,415	2,960,331	226	156	394,832	250,910	41,562	34,827	350,258	197,412
Rye flour.....barrels.....	4,296	14,952			6	23	25	81		
Wheat.....bushels.....	55,483,183	60,197,406	3,469,571	3,948,504	13,247,236	14,518,561	23,580,960	25,368,526	1,644,072	1,630,001
Wheat flour.....barrels.....	3,236,292	10,698,547	451,544	2,608,838	179,056	917,539	546,752	2,872,664	66,946	359,654
Other small grain and pulse				12,682		1,711		8,840		
Malt, farina, and all other preparations of breadstuffs used as food		950,864		508,900		163,532		40,389		1,959
Provisions:										
Bacon and hams.....pounds.....	511,909,924	36,330,196	96,355,786	6,998,976	91,127,241	5,698,206	22,751,212	1,300,983	477,934	38,643
Beef, fresh.....do.....	44,414,227	4,045,029	897,158	77,469	4,434,045	752,459				
Beef, salted or cured.....do.....	1,520,836	4,000,836	2,893,318	117,092	4,509,026	316,906	491,297	32,579	42,599	2,292
Butter.....do.....	27,081,265	4,428,005	2,290,049	698,496	1,723,924	212,785	124,829	19,813	33,494	4,839
Cheese.....do.....	131,862,419	11,789,675	8,373,494	268,333	3,115,039	254,445	169,064	17,139	44,864	2,742
Condensed milk.....do.....										256
Eggs.....dozen.....	78,899	11,547	1,600	350			399	40		939
Fish, dried or smoked.....cwt.....	86,624	362,161	79,998	287,199			444	1,819	171	
Fish, fresh.....barrels.....	21,833	126,617	17,422	58,617	1,198	6,092	404	1,868	135	591
Fish, pickled.....do.....		364,551		85,441		4,495		1,866		2,532
Lard.....pounds.....	249,358,426	17,490,876	33,554,058	2,292,900	12,363,997	806,398	26,121,149	1,869,931	313,275	22,133
Meat, preserved.....pounds.....		6,972,479		130,313		40,199		43,650		856
Mutton, fresh.....pounds.....	886,875	71,802	180,375	14,021	440,465	37,039				
Pork.....pounds.....		307,732		2,278		9,468		44,871		103
Relishes and sauces.....pounds.....		2,715		1,125				11		18
Sausages.....pounds.....	49,962,526	2,793,604	21,049,293	1,362,187	1,100,277	54,901	1,674,178	85,822	193,933	9,547
Onions.....bushels.....	38,026	35,506	15,134	11,683	46	84		90	1,651	1,248
Potatoes.....do.....	524,032	48,796	5,316	4,240	1,545	2,333	2,604	2,464	4,841	3,619
Other vegetables.....do.....		25,426		7,035		5,253		1,073		64
Vegetables, prepared or preserved		56,289		4,171		37,413		5,839		800

APPENDIX No. 30.

Number of miles of railroad in operation and the number of miles constructed each year in the United States, from 1830 to 1878, inclusive.

[From Poor's Railroad Manual for 1879.]

Year.	In operation at the end of each year.	Constructed each year.	Year.	In operation at the end of each year.	Constructed each year.
	<i>Miles.</i>	<i>Miles.</i>		<i>Miles.</i>	<i>Miles.</i>
1830.....	23	...	1855.....	18,374	1,654
1831.....	95	72	1856.....	22,016	3,642
1832.....	220	124	1857.....	24,503	2,487
1833.....	330	151	1858.....	26,908	2,405
1834.....	633	253	1859.....	28,789	1,881
1835.....	1,098	465	1860.....	30,635	1,846
1836.....	1,273	175	1861.....	31,286	651
1837.....	1,497	224	1862.....	32,129	843
1838.....	1,913	416	1863.....	32,170	1,050
1839.....	2,362	389	1864.....	33,806	1,728
1840.....	2,818	516	1865.....	35,065	1,177
1841.....	3,585	717	1866.....	36,801	1,736
1842.....	4,026	491	1867.....	39,259	2,459
1843.....	4,185	159	1868.....	42,229	2,979
1844.....	4,377	192	1869.....	45,844	3,615
1845.....	4,683	256	1870.....	52,916	6,069
1846.....	4,960	297	1871.....	60,299	7,379
1847.....	5,568	608	1872.....	66,171	5,873
1848.....	5,996	398	1873.....	70,276	4,105
1849.....	7,365	1,369	1874.....	72,888	2,612
1850.....	9,021	1,656	1875.....	74,098	1,210
1851.....	10,362	1,961	1876.....	76,906	2,808
1852.....	12,906	1,926	1877.....	79,197	2,291
1853.....	15,360	2,452	1878.....	81,841	2,644
1854.....	16,720	1,360			

APPENDIX No. 31.

Number of miles of railroad in operation in each State and Territory in the United States during the years 1865, 1870, 1875, 1877, and 1878, respectively.

[From Poor's Railroad Manual for 1879.]

States and Territories.	1865.	1870.	1875.	1877.	1878.
	<i>Miles.</i>	<i>Miles.</i>	<i>Miles.</i>	<i>Miles.</i>	<i>Miles.</i>
Maine.....	521	786	990	999	999
New Hampshire.....	667	738	934	964	1,009
Vermont.....	587	614	810	872	873
Massachusetts.....	1,297	1,480	1,817	1,863	1,872
Rhode Island.....	125	136	179	204	208
Connecticut.....	657	742	918	922	922
New England.....	3,834	4,494	5,638	5,814	5,873
New York.....	8,002	3,928	5,423	5,725	5,877
New Jersey.....	864	1,125	1,511	1,661	1,686
Pennsylvania.....	3,738	4,656	5,706	5,902	6,011
Delaware.....	134	197	272	272	289
Maryland and District of Columbia.....	446	671	929	944	962
West Virginia.....	365	387	615	638	699
Middle States.....	8,539	10,904	14,455	15,142	15,454
Virginia.....	1,407	1,449	1,808	1,635	1,646
Kentucky.....	567	1,017	1,326	1,509	1,528
North Carolina.....	984	1,178	1,356	1,426	1,435
Tennessee.....	1,296	1,492	1,630	1,656	1,665
South Carolina.....	1,007	1,139	1,335	1,406	1,419
Georgia.....	1,420	1,845	2,264	2,339	2,415
Florida.....	418	446	484	485	487
Alabama.....	805	1,157	1,800	1,802	1,839
Mississippi.....	898	900	1,018	1,088	1,126
Louisiana.....	335	450	466	466	466
Southern States.....	9,129	11,163	13,287	13,812	14,026
Ohio.....	3,331	3,538	4,461	4,878	5,151
Michigan.....	941	1,038	3,346	3,477	3,593
Indiana.....	2,217	3,177	3,963	4,057	4,198
Illinois.....	3,157	4,823	7,109	7,392	7,506
Wisconsin.....	1,010	1,525	2,566	2,701	2,810
Minnesota.....	213	1,092	1,990	2,194	2,535
Dakota Territory.....		65	275	290	320
Iowa.....	891	2,683	3,850	4,134	4,266
Missouri.....	925	2,900	2,906	3,198	3,286
Indian Country.....			275	275	275
Arkansas.....	38	256	740	767	783
Texas.....	465	711	1,685	2,210	2,428
Nebraska.....	123	705	1,167	1,286	1,344
Kansas.....	40	1,501	2,150	2,352	2,427
Colorado.....		157	807	1,045	1,165
New Mexico Territory.....					8
Wyoming Territory.....		459	459	465	472
Idaho Territory.....					80
Utah Territory.....		257	506	506	543
Western States and Territories.....	13,350	24,587	38,254	41,227	43,190
Nevada.....		593	601	627	627
California.....	214	925	1,603	2,080	2,149
Arizona Territory.....					27
Oregon.....	19	159	248	248	283
Washington Territory.....			110	197	212
Pacific States and Territories.....	233	1,677	2,462	3,152	3,298
RECAPITULATION.					
New England States.....	3,834	4,494	5,638	5,814	5,873
Middle States.....	8,539	10,904	14,455	15,142	15,454
Southern States.....	9,129	11,163	13,287	13,812	14,026
Western States and Territories.....	13,350	24,587	38,254	41,227	43,190
Pacific States and Territories.....	233	1,677	2,462	3,152	3,298
Grand total.....	35,085	52,885	74,096	79,147	81,841

APPENDIX No. 32.

Miles of railroad operated, and capital account, earnings, and dividends paid, from 1871 to 1878, inclusive.

Year.	Oper- ated.	Capital and funded debt.	Earnings.				Dividends paid.
			Gross.	Net.	From freight.	From pas- sengers.	
	<i>Miles.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1871	44, 614	2, 664, 627, 645	403, 329, 208	141, 746, 404	294, 430, 322	108, 898, 886	56, 456, 681
1872	57, 323	3, 159, 423, 057	465, 241, 055	165, 754, 373	340, 931, 785	132, 309, 270	64, 418, 157
1873	66, 237	3, 784, 548, 034	526, 419, 935	183, 810, 562	389, 035, 508	137, 384, 427	67, 120, 799
1874	69, 273	4, 221, 763, 594	520, 466, 016	189, 570, 958	379, 466, 935	140, 999, 081	67, 042, 942
1875	71, 759	4, 415, 631, 630	503, 065, 505	185, 506, 438	363, 960, 234	139, 105, 271	74, 294, 296
1876	78, 508	4, 468, 591, 935	497, 257, 959	186, 452, 752	361, 187, 376	136, 120, 583	68, 039, 668
1877	74, 112	4, 568, 597, 248	472, 909, 272	170, 976, 097	347, 704, 548	125, 204, 724	58, 556, 312
1878	78, 960	4, 589, 948, 793	490, 103, 351	187, 575, 167	365, 466, 061	124, 637, 290	53, 629, 366

APPENDIX NO. 33.

Mileage, capital, cost, and revenue of the railroads of the United States for 1878.

[Compiled from data published by H. V. Poor, esq., of New York.]

Sections.	Length of road and sidings.	Cars.			Number of engines.	Total capital account.	Cost of railroad and equipment.	Gross earnings.	Net earnings.
		Number of passenger.	Number of baggage, mail and express.	Number of freight.					
New England States <i>a</i>	7,895	1,852	612	30,538	1,634	Dollars. 305,255,413	Dollars. 288,121,385	Dollars. 41,260,203	Dollars. 13,685,927
Middle States <i>b</i>	24,183	4,420	1,322	205,144	5,700	1,468,776,417	1,098,067,136	155,458,968	41,559,993
Southern States <i>c</i>	17,559	1,333	635	31,220	2,052	1,598,945,467	1,545,559,226	82,819,464	18,552,819
Western States <i>d</i>	45,737	3,284	1,682	141,972	6,375	1,962,316,880	1,836,084,464	106,530,095	73,785,368
Pacific States <i>e</i>	2,755	3,345	67	6,676	273	1,154,808,897	1,138,328,975	10,082,491	3,501,633
Pacific railroads <i>f</i>	2,541	449	95	7,463	406	282,194,775	263,170,735	36,652,180	16,480,425
Total.....	100,650	11,683	4,413	423,013	16,445	4,772,297,349	4,106,331,921	490,103,851	187,575,167

a Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.*b* New York, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia (N.), and District of Columbia.*c* West Virginia (S.), Virginia, Kentucky, North Carolina, Tennessee, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, and Arkansas.*d* Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Dakota Territory, Iowa, Nebraska, Missouri, Kansas, and Colorado.*e* California, Nevada, Oregon, Utah Territory, and Washington Territory.*f* Union Pacific and Great Pacific.

APPENDIX No. 34.

Percentage of the number of passenger cars, freight cars, and engines, and the gross earnings of the railroads of the different sections of the country.

[Compiled from data published by H. V. Poor, esq., of New York.]

Sections.*	Passenger cars.	Freight cars.	Engines.	Gross earnings.
New England States	15.85	7.22	9.94	8.42
Middle States	87.84	48.50	34.66	31.72
Southern States	11.41	7.38	12.48	10.78
Western States	28.11	33.56	38.76	40.77
Pacific States	2.95	1.58	1.09	2.06
Pacific Railroads	3.84	1.76	2.47	6.25
Total	100.00	100.00	100.00	100.00

* For the States embraced in the several sections see preceding table.

APPENDIX No. 35.

Dates of termination of the year for railroad statistical returns under the laws of the several States which require such returns to be made to a State railroad commissioner or other officer.

States.	Returns for the year ending—	States.	Returns for the year ending—
California	December 31.	Ohio	June 30.
Connecticut	September 30.	Pennsylvania	December 31.
Illinois	July 1.	Rhode Island	Close of railroad year, August 31.
Iowa	June 30.		September 30, October 31.
Maine	September 30.		
Massachusetts	Do.	South Carolina	Close of railroad year, September 30, October 31.
Michigan	December 31.		
Minnesota	June 30.	Vermont	June 30.
Missouri	July 1.	Virginia	September 30.
Nevada	December 31.	Wisconsin	Do.
New Hampshire	March 31.		
New Jersey	December 31.		
New York	September 30.		

APPENDIX No. 36.

Number of tons of freight moved one mile upon the following-named railroads, for the years 1873 to 1878, inclusive.

Year.	Lake Shore and Michigan South-ern.	Wabash.	Ohio and Missis-sippi.	Chicago, Millwan-kee and Saint Paul.	Chicago and North-western.	Chicago, Rock Island and Pa-cific.	Chicago, Burling-ton and Quincy.	Chicago and Alton.	Illinois Central.	Michigan Central.	Atlantic and Great Western.
1873	Tons. 1,053,827,189	Tons. 306,755,366	Tons. 143,438,311	Tons. 257,638,523	Tons. 366,475,480	Tons. 219,394,094	Tons. 418,385,194	Tons. (*)	Tons. 275,803,422	Tons. 246,073,512	Tons. 273,297,096
1874	999,342,081	278,240,865	147,005,882	259,168,288	461,413,680	249,528,401	445,686,220	(*)	273,550,253	313,401,088	819,225,400
1875	943,236,161	214,490,666	148,282,802	272,539,502	454,550,357	287,913,578	436,863,161	168,523,879	284,650,911	318,866,008	282,715,011
1876	1,133,834,828	301,758,274	178,105,806	284,808,027	503,132,369	288,525,696	550,241,798	217,835,171	294,602,314	358,848,498	288,392,975
1877	1,090,005,561	380,668,034	(†)	271,598,139	468,807,900	291,083,426	667,553,189	211,947,565	249,845,941	473,837,807	337,378,487
1878	1,340,467,826	501,884,839	(†)	321,318,902	623,768,583	357,259,088	894,053,597	248,286,318	300,245,681	548,063,707	330,728,186

* Not obtainable on account of damage to papers and records by fire, December, 1878.

† Not furnished.

APPENDIX No. 37.

Quantity of pig-iron produced, imported, exported, and retained for consumption in the United States during the years 1830, 1840, and 1850, and from 1855 to 1878, inclusive.

[Expressed in tons of 2,240 pounds.]

Year ended—	Production.*	Imports.	Total production and imports.	Exports (foreign and domestic).	Retained for home consumption.
<i>September 30—</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
1830	142,000	1,125	143,125	96	142,029
1840	315,000	5,516	320,516	.....	320,516
<i>June 30—</i>					
1850	650,000	74,874	724,874	333	724,541
1855	657,338	96,925	750,263	1,049	755,214
1856	700,159	56,012	750,171	1,125	758,046
1857	788,515	51,794	840,309	2,950	837,359
1858	712,640	41,966	754,606	551	754,055
1859	629,548	72,517	702,065	181	701,884
1860	750,559	71,498	822,057	448	821,609
1861	821,223	69,272	890,495	1,236	889,259
1862	653,164	22,247	675,411	2,395	673,016
1863	703,269	31,007	734,276	1,750	732,526
1864	846,075	102,223	948,298	1,759	946,539
1865	1,014,282	44,601	1,058,883	534	1,058,349
1866	831,769	101,261	933,030	1,387	931,643
1867	1,205,663	112,042	1,317,705	628	1,317,077
1868	1,305,023	112,133	1,417,156	289	1,416,867
1869	1,431,250	136,975	1,568,225	273	1,567,952
1870	1,711,287	153,283	1,864,570	1,456	1,863,114
1871	1,665,178	178,139	1,843,317	3,772	1,839,545
1872	1,706,780	247,529	1,954,309	2,172	1,952,137
1873	2,548,713	215,496	2,764,209	2,818	2,761,391
1874	2,560,963	92,042	2,653,005	10,152	2,642,853
1875	2,401,262	53,437	2,454,699	16,192	2,438,506
1876	2,023,733	79,455	2,103,188	7,341	2,095,847
1877	1,868,955	67,922	1,936,877	3,560	1,933,317
1878	2,066,594	56,000	2,121,594	9,963	2,111,631
1879	2,301,215	87,576	2,388,791	3,231	2,385,560

* In the column of Production, the amount set opposite the fiscal year is the production of the preceding calendar year. This is done in order that the year in which the iron is mainly marketed and consumed may agree with the import and export year.

APPENDIX No. 38.

Quantity of iron and steel railroad-bars produced, imported, exported, and retained for consumption in the United States, from 1855 to 1878, inclusive.

[Expressed in tons of 2,240 pounds.]

Years ended June 30—	Production.*			Imports.	Total production and imports.	Exports (foreign and domestic).	Retained for home consumption.
	Iron.	Steel.	Total.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1855	96,443		96,443	127,516	223,959	2,679	221,280
1856	123,816		123,816	155,496	279,312	3	279,309
1857	160,730		160,730	179,305	340,035	1,543	338,492
1858	144,570		144,570	75,745	220,315	179	220,136
1859	146,171		146,171	69,966	216,137	258	215,879
1860	174,513		174,513	122,175	296,688	460	296,228
1861	183,070		183,070	74,490	257,560	661	256,899
1862	169,480		169,480	8,611	178,091	108	177,983
1863	190,993		190,993	17,088	208,081	8,878	199,203
1864	246,221		246,221	118,714	364,935	565	364,370
1865	299,437		299,437	77,518	376,955	1,957	374,998
1866	318,118		318,118	78,007	396,125	458	395,667
1867	384,623		384,623	96,272	480,895	159	480,736
1868	410,319	2,277	412,596	151,097	563,693	710	562,983
1869	445,972	6,451	452,423	237,704	690,127	564	689,563
1870	521,371	8,616	529,987	279,766	809,753	885	808,868
1871	523,214	30,357	553,571	458,056	1,011,627	1,341	1,010,286
1872	658,467	34,152	692,619	531,537	1,224,156	4,484	1,219,672
1873	808,866	83,991	892,857	357,631	1,250,488	7,147	1,243,341
1874	679,520	115,192	794,712	148,920	943,632	7,313	936,319
1875	521,847	129,414	651,261	42,082	693,342	14,199	679,143
1876	447,901	259,699	707,600	4,708	712,308	13,554	698,754
1877	417,114	368,269	785,383	30	785,413	6,103	779,310
1878	296,911	885,865	682,776	11	682,787	8,426	674,361
1879	288,295	490,817	788,112	2,611	790,723	7,127	783,596

* In the column of Production, the amount set opposite the fiscal year is the production of the preceding calendar year. This is done in order that the year in which the rails are mainly marketed and consumed may agree with the import and export year.

APPENDIX No. 39.

Production of petroleum in the United States.

Year ended June 30—	Barrels (of 42 gallons) produced.	Gallons produced.
1860.....	251,000	10,542,000
1861.....	1,416,804	59,503,768
1862.....	2,697,149	113,280,258
1863.....	2,945,999	123,731,958
1864.....	2,478,709	104,105,778
1865.....	2,424,905	101,846,010
1866.....	3,165,700	132,959,400
1867.....	3,591,900	150,859,800
1868.....	3,613,709	151,775,778
1869.....	4,046,558	169,956,436
1870.....	4,411,016	185,262,672
1871.....	5,559,775	233,404,550
1872.....	5,842,497	245,384,874
1873.....	7,242,343	304,178,408
1874.....	11,188,741	469,927,122
1875.....	10,083,828	423,520,778
1876.....	8,823,142	370,571,964
1877.....	10,822,871	454,500,562
1878.....	14,738,262	619,077,004
1879.....	17,089,486	717,758,412

*Petroleum and its products exported from the United States.**

Year ended June 30—	Mineral, crude (including all natural oils, without re- gard to grav- ity).	Mineral, refined or manufactured.			Residuum (tar, pitch and all other from which the light bodies have been distil- led).
		Napthas, benzine, gasoline, &c.	Illuminating.	Lubricating (heavy par- affine, &c.).	
	Gallons.	Gallons.	Gallons.	Gallons.	Barrels.†
1864.....	9,980,654	438,197	12,791,518		
1865.....	12,203,897	480,947	12,722,005		
1866.....	10,057,943	673,477	84,255,921		
1867.....	7,344,248	224,576	62,096,657		
1868.....	10,029,659	1,517,268	67,909,961		
1869.....	13,425,560	2,673,094	84,403,492		
1870.....	10,403,314	5,422,604	97,902,505		
1871.....	9,859,038	7,209,592	132,608,936		
1872.....	13,559,764	8,092,635	122,539,575	541,419	10,438
1873.....	18,459,407	9,743,593	158,102,414	748,699	16,397
1874.....	17,776,419	9,737,457	217,220,504	1,244,305	43,519
1875.....	14,718,114	11,758,940	191,551,933	1,173,478	65,544
1876.....	20,520,397	14,780,230	204,814,673	963,442	61,462
1877.....	26,819,202	15,140,183	202,441,844	1,601,065	76,110
1878.....	20,930,727	10,416,621	289,214,541	2,304,624	94,485
1879.....	25,874,488	15,054,361	331,586,442	2,487,661	79,739

* The export of petroleum during the year ended June 30, 1878, constituted about 66 per cent. of the production.

† Barrels of 42 gallons each.

APPENDIX No. 40.

Quantities of raw cotton produced, imported, exported, and retained for consumption in the United States, from 1849 to 1879, inclusive.

Year ended June 30—	ANNUAL CROP.			Imported.	Total production and imports.	Exports, domestic and foreign.	Retained for home consumption.	Percentage of production and imports retained for home consumption.	Percentage of production and imports exported.
	Production.*	Average net weight of bale.†	Production in pounds, gross weight.*						
1849	Bales.	Lbs.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.		
1849	2,808,506	436	1,306,020,727	157,276	1,306,178,003	1,028,749,167	279,428,836	21.39	78.61
1850	2,171,706	429	987,561,586	269,114	987,830,700	635,418,893	352,411,807	35.68	64.32
1851	2,415,257	416	1,065,031,726	157,757	1,065,189,483	927,237,080	137,952,394	12.95	87.05
1852	3,090,029	428	1,401,884,356	244,548	1,402,128,904	1,093,230,639	308,898,265	22.03	77.97
1853	3,352,882	428	1,521,135,505	722,628	1,521,858,133	1,111,612,892	410,245,241	26.98	73.04
1854	3,035,027	430	1,383,365,306	545,210	1,383,910,516	987,833,106	396,077,410	28.62	71.38
1855	2,932,339	434	1,346,993,233	2,115,307	1,351,108,600	1,008,424,701	342,683,899	25.36	74.64
1856	3,645,345	420	1,622,907,594	1,096,841	1,624,004,435	1,351,431,701	272,572,734	16.78	83.22
1857	3,056,510	444	1,438,520,102	802,233	1,439,322,335	1,048,282,475	391,039,860	27.17	72.83
1858	3,238,962	442	1,506,918,476	590,800	1,507,509,276	1,114,624,012	388,885,264	25.80	74.20
1859	3,994,481	447	1,802,064,987	743,500	1,803,408,487	1,386,738,676	506,669,811	28.76	71.24
1860	4,853,770	445	2,275,372,309	2,005,529	2,277,377,838	1,767,830,609	509,547,229	22.37	77.63
1861	3,826,086	477	1,934,545,603	881,371	1,935,426,974	307,634,242	.....	.....	.....
1862	()	()	()	29,640,853	.....	5,198,230	.....	.....	.....
1863	()	()	()	33,877,365	.....	12,904,119	.....	.....	.....
1864	()	()	()	26,475,957	.....	13,420,146	.....	.....	.....
1865	()	()	()	36,007,007	.....	11,918,656	.....	.....	.....
1866	2,228,987	441	1,041,962,263	6,276,887	1,048,239,150	651,921,489	336,317,661	37.81	62.19
1867	2,056,271	444	961,175,303	726,021	969,901,324	662,733,679	307,167,645	31.67	68.33
1868	2,496,895	443	1,173,431,114	514,992	1,173,946,106	785,415,226	388,530,880	33.10	66.90
1869	2,439,039	437	1,129,811,645	1,522,068	1,131,333,713	644,957,327	486,376,386	42.99	57.01
1870	3,154,946	434	1,451,401,357	1,698,133	1,453,099,490	958,785,304	494,314,186	34.02	65.98
1871	4,352,317	438	2,020,693,736	1,196,840	2,021,890,576	1,463,704,507	558,186,069	27.61	72.39
1872	2,074,351	439	1,278,064,494	2,894,183	1,280,978,677	933,825,710	347,152,967	27.10	72.90
1873	3,930,502	440	1,833,188,931	4,425,524	1,837,614,455	1,200,398,178	637,216,277	34.68	65.32
1874	4,170,386	449	1,940,648,351	3,625,830	1,944,274,181	1,358,979,913	585,294,268	30.10	69.90
1875	3,632,001	439	1,698,844,031	2,149,332	1,700,993,363	1,260,851,944	440,141,419	25.88	74.12
1876	4,669,286	436	2,157,958,142	2,451,419	2,160,409,561	1,401,629,831	668,779,730	30.96	69.04
1877	4,485,423	438	2,082,492,190	2,656,507	2,085,148,757	1,445,047,079	639,501,678	30.67	69.33
1878	4,611,265	450	2,294,973,405	3,032,013	2,298,005,418	1,608,469,052	689,536,368	30.00	70.00
1879	5,073,531	442	2,242,500,702	2,993,677	2,245,494,379	1,628,875,979	616,618,400	27.46	72.54

*In the columns of "Production" the amount placed opposite the fiscal year is the production of the preceding calendar year, since the exports and consumption of cotton during the fiscal year are mainly of the production of the preceding calendar year.

†The Liverpool records of average net weight of American bales of cotton run through a much longer period than American estimates of gross weight. A competent American authority has estimated the average gross weights, prior to 1860, at about 5 per cent. above the average Liverpool net weights. It is found that 6 per cent. will more nearly represent the difference between the foreign net and American gross averages of the weight per bale of each crop. This table is therefore calculated on the basis of 6 per cent. in addition to net weight, as the nearest available approximation to the true quantity. The exact difference is unattainable, as there is no complete annual record of American averages of weight of bales. The few which have been do not agree precisely with the foreign averages. As the exports are expressed in gross pounds (including the envelope or tare), the comparison can only be made with gross pounds. —J. R. D.

†No record during the war period.

APPENDIX No. 41.

Exports of raw cotton of domestic production from each port of the United States during the year ended August 31, 1879.

Order.	Customs districts.	Quantities.		Values.
		Bales.	Pounds.	Dollars.
1	New Orleans, La.....	1,247,629	575,072,568	55,778,791
2	Savannah, Ga.....	461,964	219,756,150	20,959,906
3	New York, N. Y.....	882,589	180,182,051	20,078,251
4	Charleston, S. C.....	375,465	171,734,138	18,414,078
5	Galveston, Tex.....	349,796	174,406,298	16,254,769
6	Norfolk and Portsmouth, Va.....	203,536	94,804,892	9,278,954
7	Boston and Charlestown, Mass.....	122,686	59,052,096	6,240,696
8	Mobile, Ala.....	123,214	61,527,234	5,975,343
9	Baltimore, Md.....	95,031	44,753,140	5,022,257
10	Wilmington, N. C.....	64,431	29,808,488	2,734,150
11	Philadelphia, Pa.....	26,489	12,696,425	1,277,808
12	Pensacola, Fla.....	16,814	8,310,235	877,699
13	Huron, Mich.....	11,870	5,892,740	580,440
14	Beaufort, S. C.....	8,129	3,714,613	333,544
15	Saluria, Tex.....	3,323	1,717,364	162,604
16	Detroit, Mich.....	2,282	971,841	95,102
17	Corpus Christi, Tex.....	1,861	706,285	67,190
18	Passamaquoddy, Me.....	713	320,550	31,750
19	Fernandina, Fla.....	246	80,050	20,160
20	Vermont, Vt.....	111	49,630	4,920
21	Brazos de Santiago, Tex.....	50	22,516	2,000
22	San Francisco, Cal.....	9	4,018	800
23	Minnesota, Minn.....		50	2
	Total.....	3,497,768	1,645,063,172	164,133,335

APPENDIX No. 42.

Annual production, acreage, total value, value per bushel, yield per acre, and value per acre of the cereal crops of the United States from 1868 to 1878, inclusive.

[From the annual reports of the Statistician of the Department of Agriculture.]

CORN.

Calendar year.	Total production.	Total area of crop.	Total value of crop.	Average value per bushel.	Average yield per acre.	Average value of yield per acre.
	<i>Bushels.</i>	<i>Acres.</i>	<i>Dollars.</i>	<i>Cents.</i>	<i>Bushels.</i>	<i>Dollars.</i>
1868.....	906,527,000	34,887,248	569,512,460	62.8 +	25.9 +	16 32
1869.....	874,320,000	37,103,245	658,532,700	75.3 +	23.5 +	17 75
1870.....	1,094,255,000	38,616,977	601,839,030	54.9 +	28 3 +	15 57
1871.....	991,898,000	34,091,137	478,275,900	48.2 +	20.1 —	14 02
1872.....	1,092,719,000	35,526,836	435,149,290	39.8 +	30.7 +	12 24
1873.....	932,274,000	39,197,148	447,183,020	48.0 —	23.8 +	11 41
1874.....	850,148,500	41,036,918	550,043,080	64.7 —	20.7 +	13 40
1875.....	1,321,069,000	44,841,371	555,445,930	42.0 +	29.4 +	12 38
1876.....	1,283,827,000	49,033,364	475,491,210	37.0 +	26.1 +	9 69
1877.....	1,342,568,000	50,369,113	480,648,400	35.8 +	26.6 +	9 54
1878.....	1,388,218,750	51,585,000	441,158,405	31.8 +	26.9 +	8 53

WHEAT.

1868.....	224,036,600	18,460,132	319,195,290	142.4 +	12.1 +	17 29
1869.....	260,146,900	19,181,004	244,924,120	94.1 +	13.5 +	12 76
1870.....	235,884,700	18,992,591	245,865,045	104.2 +	12.4 +	12 94
1871.....	230,722,400	19,943,893	290,411,820	125.8 +	11.5 +	14 56
1872.....	249,997,100	20,858,359	310,180,375	124.0 +	11.9 +	14 67
1873.....	281,254,700	22,171,676	323,594,805	115.0 +	12.7 —	14 59
1874.....	308,102,700	24,967,027	291,107,895	94.4 +	12.3 +	11 66
1875.....	292,136,000	26,381,512	294,580,900	100.0 +	11.0 +	11 16
1876.....	289,356,500	27,627,021	300,259,300	103.7 +	10.4 +	10 86
1877.....	364,194,146	26,277,548	394,695,779	108.2 +	13.9 +	15 08
1878.....	420,122,400	32,108,560	326,346,424	77.7 +	13.1 +	10 16

RYE.

1868.....	22,504,800	1,651,321	28,683,677	127.4 +	13.6 +	17 87
1869.....	22,527,900	1,657,584	21,877,294	97.1 +	13.5 +	13 19
1870.....	15,473,600	1,176,137	12,612,605	81.5 +	13.1 +	10 72
1871.....	15,865,500	1,069,531	12,145,646	79.0 +	14.3 +	11 85
1872.....	14,888,600	1,048,654	11,363,683	76.3 +	14.1 +	10 83
1873.....	15,142,000	1,150,835	11,548,126	76.2 +	18.1 +	10 04
1874.....	14,960,900	1,116,716	12,870,411	85.8 +	18.4 +	11 52
1875.....	17,722,100	1,359,788	13,631,900	76.9 +	13.0 +	10 02
1876.....	20,374,800	1,468,374	13,635,626	66.9 +	13.8 +	9 28
1877.....	21,170,100	1,412,902	12,542,895	59.2 +	14.9 +	8 87
1878.....	26,842,790	1,622,700	13,592,626	52.6 +	15.9 +	8 38

OATS.

1868.....	254,960,800	9,065,736	142,484,910	55.9 —	26.3 +	14 74
1869.....	288,334,000	9,461,441	137,347,900	47.6 +	30.4 +	14 51
1870.....	247,277,400	8,792,395	107,136,710	43.3 +	28.1 +	12 18
1871.....	255,743,000	8,865,809	102,570,030	40.1 +	30.5 +	12 26
1872.....	271,747,000	9,000,769	91,315,710	33.6 +	30.1 +	10 14
1873.....	270,340,000	9,751,700	101,175,750	37.4 +	27.7 +	10 37
1874.....	240,369,000	10,897,412	125,047,530	52.0 +	22.0 +	11 47
1875.....	354,317,500	11,915,075	129,499,980	36.5 +	29.7 +	10 86
1876.....	320,864,000	12,358,908	112,865,900	35.1 +	24.0 —	8 44
1877.....	406,394,000	12,826,148	118,661,550	29.2 +	31.6 +	9 25
1878.....	413,578,560	13,176,500	101,945,830	24.6 +	31.4 +	7 74

The cereal crops of the United States, &c.—Continued.

BARLEY.

Calendar year.	Total production.	Total area of crop.	Total value of crop.	Average value per bushel.	Average yield per acre.	Average value of yield per acre.
	<i>Bushels.</i>	<i>Acres.</i>	<i>Dollars.</i>	<i>Cents.</i>	<i>Bushels.</i>	<i>Dollars.</i>
1868.....	22,896,100	1,037,498	29,809,931	130.2 —	24.4 +	31.79
1869.....	28,652,200	1,025,795	23,387,909	81.6 +	27.9 +	22.79
1870.....	26,295,400	1,108,924	22,244,584	84.5 +	23.7 +	20.65
1871.....	26,718,500	1,177,666	21,541,777	80.6 +	22.6 +	18.29
1872.....	26,840,400	1,397,082	19,837,773	73.8 +	19.2 +	14.19
1873.....	32,044,491	1,387,106	29,333,529	91.5 +	23.1 +	21.15
1874.....	32,552,500	1,580,626	29,983,769	92.1 +	20.6 —	18.96
1875.....	36,908,600	1,789,002	29,952,082	81.1 +	20.6 +	16.73
1876.....	38,710,500	1,766,511	25,735,110	66.4 +	21.9 +	14.56
1877.....	34,441,400	1,614,654	22,028,044	63.9 +	21.3 +	13.64
1878.....	42,245,630	1,790,400	24,483,315	58	23.6	13.67

BUCKWHEAT.

1868.....	19,863,700	1,113,093	20,814,315	104.8 —	17.8	18.68
1869.....	17,431,100	1,028,093	15,814,265	90.7 +	16.9 +	15.37
1870.....	9,841,500	536,992	7,725,044	78.4 +	18.3 +	14.38
1871.....	8,328,700	413,915	6,900,268	82.8 +	20.1 +	16.67
1872.....	8,133,500	448,497	6,747,618	82.9 +	18.1 +	15.94
1873.....	7,837,700	454,152	6,382,043	81.4 +	17.2 +	14.65
1874.....	8,016,600	452,590	6,477,885	80.8 +	17.7 +	14.31
1875.....	10,082,100	575,530	7,166,267	71.0 +	17.5 +	12.45
1876.....	9,668,800	666,441	7,021,498	72.6 +	14.5 +	10.53
1877.....	10,177,000	649,923	6,994,810	68.7 +	15.6 +	10.76
1878.....	12,246,820	673,100	6,454,129	52.7	18.2	9.59

RECAPITULATION.

Calendar year.	Total production.	Total area of crop.	Total value of crop.
	<i>Bushels.</i>	<i>Acres.</i>	<i>Dollars.</i>
1868.....	1,450,789,000	66,715,926	1,110,506,583
1869.....	1,491,412,100	69,457,762	1,101,894,188
1870.....	1,629,027,600	80,254,016	997,423,016
1871.....	1,528,776,100	65,061,961	911,845,441
1872.....	1,664,331,600	68,280,197	874,594,450
1873.....	1,538,892,891	74,112,137	919,217,273
1874.....	1,454,180,200	80,051,289	1,015,536,579
1875.....	2,032,235,300	86,863,178	1,090,277,000
1876.....	1,962,821,600	93,920,619	935,068,844
1877.....	2,178,934,646	93,150,288	1,085,579,455
1878.....	2,302,254,950	100,956,260	913,975,929

NOTE.—The following are taken as the weights per bushel of the various cereals in this table: Corn, 56 pounds; wheat, 60 pounds; rye, 56 pounds; oats, 32 pounds; barley, 48 pounds; buckwheat 48 pounds.

APPENDIX No. 43.

Product of each principal crop of the United States for the year 1878, as reported by the Department of Agriculture.

State.	Indian corn.	Wheat.	Rye.	Oats.	Barley.	Buckwheat.	Potatoes.	Hay.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Tons.</i>
Maine.....	2,180,000	396,200	42,400	2,067,000	817,300	432,000	3,833,000	1,290,000
New Hampshire.....	2,207,000	189,000	39,600	1,313,760	96,600	107,000	2,649,600	697,000
Vermont.....	2,275,500	527,000	83,420	3,914,580	141,750	491,400	2,721,600	1,222,080
Massachusetts.....	1,260,000	18,280	446,340	489,800	60,000	43,200	2,046,000	884,450
Rhode Island.....	298,800	21,450	21,450	79,200	8,030	.....	513,500	116,500
Connecticut.....	2,220,000	27,660	443,040	1,298,080	26,400	118,300	1,336,500	843,200
New York.....	25,020,000	14,128,400	3,774,000	45,080,000	4,917,200	5,386,000	16,135,600	6,480,000
New Jersey.....	9,792,000	2,497,500	564,740	5,224,800	.....	374,300	4,344,000	681,500
Pennsylvania.....	44,065,000	22,095,000	8,777,620	37,778,400	677,800	2,720,000	8,901,000	4,107,500
Delaware.....	4,500,000	1,143,900	14,500	462,000	.....	.....	426,300	40,656
Maryland.....	11,298,500	6,363,000	370,840	3,440,000	.....	84,600	1,041,000	241,800
Virginia.....	18,200,000	7,068,240	473,200	7,928,500	.....	47,250	1,000,800	285,600
North Carolina.....	22,603,200	354,410	4,448,000	4,448,000	.....	.....	1,197,900	132,980
South Carolina.....	12,276,000	3,023,800	38,500	1,072,000	.....	.....	96,600	26,000
Georgia.....	24,398,000	2,758,000	.....	7,154,280	.....	.....	345,030	38,790
Florida.....	2,124,000	1,235,600	.....	1,601,650	.....	.....	453,900	34,200
Alabama.....	23,928,000	428,400	.....	929,600	.....	.....	305,600	27,720
Mississippi.....	19,474,000	.....	.....	14,000	.....	.....	.....	.....
Louisiana.....	16,875,200	.....	.....	5,531,500	.....	.....	604,800	127,200
Texas.....	58,396,000	7,200,000	54,000	1,653,420	.....	.....	962,200	24,760
Arkansas.....	22,962,000	1,038,000	51,040	5,707,920	.....	101,650	1,106,400	174,640
West Virginia.....	37,422,700	7,835,000	361,200	3,534,600	.....	86,400	982,500	341,180
Kentucky.....	10,118,400	3,737,500	.....	7,920,000	42,900	.....	2,930,000	410,380
Ohio.....	45,923,100	4,910,400	963,960	32,848,500	375,000	.....	8,210,400	3,032,080
Michigan.....	104,643,700	38,120,000	1,263,800	13,869,300	1,490,000	431,800	6,916,000	1,155,420
Indiana.....	31,247,700	27,989,200	283,600	16,467,200	1,261,000	676,000	3,840,000	1,690,000
Illinois.....	138,252,000	33,136,000	435,000	64,284,780	1,830,600	147,000	9,339,800	3,531,300
Wisconsin.....	223,932,700	31,620,000	2,511,000	33,528,000	4,284,000	504,000	8,307,000	1,805,000
Minnesota.....	36,900,000	21,154,400	3,551,200	20,352,800	2,499,600	102,200	8,877,200	1,609,920
Iowa.....	173,258,400	28,624,000	176,800	38,332,800	5,068,000	122,200	10,070,000	3,504,000
Missouri.....	93,062,400	30,440,960	481,600	19,584,000	2,103,200	46,400	5,415,000	1,620,000
Kansas.....	81,563,400	20,196,000	732,000	16,020,000	68,200	.....	4,530,000	1,530,000
Nebraska.....	64,223,000	27,221,000	2,470,400	6,428,500	.....	30,400	1,750,000	620,400
California.....	3,467,250	13,672,900	1,482,500	6,750,000	14,800,000	.....	4,377,600	1,271,000
Oregon.....	166,500	41,890,000	1,195,000	6,790,000	370,300	.....	4,588,500	1,160,500
Nevada, Colorado, and Territories.....	2,670,000	15,000,000	13,230	2,236,600	.....	.....	997,500	300,000
Totals.....	1,388,218,750	420,122,400	25,842,790	413,578,560	42,245,630	12,240,820	124,126,650	39,608,296

APPENDIX No. 44.

Quantity of Indian corn produced, imported, exported, and retained for consumption in the United States during the years 1840, 1850, 1860, and from 1867 to 1879, inclusive.

Year ended—	Production.*	Imports.	Total production and im- ports.	Exports, domestic and for- eign.	Retained for home con- sumption.	Estimated consumption per capita of population.	Percentage of production and imports, exported.
<i>September 30—</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	
1840	377, 531, 875	.....	377, 531, 875	574, 279	376, 957, 596	22.08	0.15
<i>June 30—</i>							
1850	592, 071, 104	.....	592, 071, 104	6, 595, 092	585, 476, 012	25.25	1.11
1860	838, 792, 740	48, 790	838, 841, 530	3, 314, 305	835, 527, 225	26.57	0.39
1867	867, 946, 295	34, 970	867, 981, 265	14, 897, 295	853, 083, 970	23.54	1.73
1868	768, 320, 000	49, 922	768, 369, 922	11, 149, 754	757, 220, 168	20.48	1.45
1869	906, 527, 000	89, 809	906, 616, 809	7, 049, 217	899, 567, 592	23.83	0.78
1870	874, 320, 000	88, 980	874, 408, 980	1, 392, 115	873, 016, 865	22.64	0.16
1871	1, 094, 255, 000	111, 080	1, 094, 366, 080	9, 826, 309	1, 084, 539, 771	27.42	0.89
1872	991, 898, 000	58, 568	991, 956, 568	34, 491, 650	957, 464, 918	23.58	2.37
1873	1, 092, 719, 000	61, 536	1, 092, 780, 536	38, 541, 930	1, 054, 238, 606	25.27	2.53
1874	932, 274, 000	76, 003	932, 350, 003	34, 434, 606	897, 915, 397	20.95	2.60
1875	850, 148, 500	28, 098	850, 186, 598	28, 858, 420	821, 328, 178	18.64	2.39
1876	1, 321, 069, 000	51, 796	1, 321, 120, 796	49, 493, 572	1, 271, 627, 224	23.06	2.75
1877	1, 283, 827, 000	30, 902	1, 283, 867, 902	70, 860, 963	1, 213, 006, 919	26.02	2.32
1878	1, 342, 558, 000	13, 423	1, 342, 571, 423	85, 461, 098	1, 257, 116, 325	25.99	6.36
1879	1, 388, 218, 750	33, 860	1, 388, 252, 619	86, 296, 252	1, 301, 956, 367	26.36	6.22

* In the column of "Production," the amount placed opposite the fiscal year, is the production of the preceding calendar year. For example: The quantity stated in the column of "Production" opposite the year 1878, is the production of the calendar year 1877, since the exports of corn during the year 1878 were principally of the crop of the calendar year 1877.

The production of corn during the years 1839, 1849, 1859, and 1869 is taken from the census reports of the succeeding years. The production for the other years is taken from the annual reports of the Statistician of the Department of Agriculture.

APPENDIX No. 45.

Quantity of wheat produced, imported, exported, and retained for consumption in the United States during the years 1840, 1850, 1860, and from 1867 to 1879, inclusive.

Year ended—	Production.*	Imports.	Total production and imports.	Exports, domestic and foreign.	Retained for home consumption.	Estimated consumption per capita of population.	Percentage of production and imports, exported.
<i>September 30—</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	
1840.....	84,823,272	593	84,823,865	1,720,860	83,103,005	4.86	2.03
<i>June 30—</i>							
1850.....	100,485,944	1,237,856	101,723,800	792,768	100,931,032	4.35	0.793
1860.....	173,104,924	9,623	173,114,547	4,155,153	168,959,394	5.37	2.40
1867.....	151,999,906	1,924,890	153,924,796	6,192,371	147,732,425	4.08	4.02
1868.....	212,441,400	1,616,508	214,057,908	16,183,192	197,924,716	5.35	7.53
1869.....	224,036,600	1,370,493	225,407,093	17,907,442	207,499,651	5.49	7.94
1870.....	260,146,900	851,326	260,998,226	36,996,585	224,001,641	5.81	14.18
1871.....	235,884,700	717,179	236,601,879	84,797,215	201,804,664	5.10	14.71
1872.....	230,722,400	1,546,623	232,269,023	26,999,985	205,269,038	5.05	11.62
1873.....	249,997,100	1,476,504	251,473,694	39,591,461	211,882,243	5.08	15.76
1874.....	281,254,700	1,646,092	282,900,792	71,833,749	211,067,043	4.90	25.39
1875.....	308,102,700	303,047	308,405,747	53,327,474	255,078,273	4.79	17.29
1876.....	292,136,000	1,568,558	293,704,558	56,441,828	237,262,730	5.23	19.22
1877.....	289,356,500	328,906	289,685,406	40,790,064	248,895,342	5.34	14.08
1878.....	364,194,146	1,351,008	365,545,154	73,654,621	291,890,533	6.09	20.22
1879.....	420,122,400	2,011,291	422,133,691	124,148,925	297,984,766	6.03	29.41

* In the column of "Production," the amount placed opposite the fiscal year is the production of the preceding calendar year. For example: The quantity stated in the column of "Production" opposite the year 1878, is the production of the calendar year 1877, since the exports of wheat during the year 1878 were principally of the crop of the calendar year 1877.

The production of wheat during the years 1839, 1849, 1859, and 1869 is taken from the census reports of the succeeding years. The production for the other years is taken from the annual reports of the Statistician of the Department of Agriculture.

APPENDIX No. 46.

Aggregate shipments from Chicago of leading articles of commerce for each calendar year from 1852 to 1878 inclusive.

Year.	Beef.	Pork.	Other cured meats.	Lard.	Butter.	Wool.	Hides.	Seals.	Salt.	Liquors and highwines.	Lead.	Coal.	Lumber.	Shingles.
	<i>Package.</i>	<i>Barrels.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Pounds.</i>	<i>Tons.</i>	<i>Feet.</i>	<i>Number.</i>
1852.....	53,965	10,976	1,446,500	1,200,000	.....	920,113	2,398,250	12,853	59,333	16,243	2,038,000	1,441	70,740,271	55,831,038
1853.....	64,499	29,809	9,269,318	1,847,852	577,358	953,100	2,857,200	2,185,269	38,735	7,027	2,252,650	2,968	88,908,348	71,442,550
1854.....	58,143	51,542	5,189,725	2,595,912	609,449	536,791	2,158,300	2,109,832	91,534	8,013	2,719,940	5,068	133,131,872	92,506,301
1855.....	55,790	77,623	6,401,487	1,803,900	1,056,631	2,158,462	3,255,750	3,494,013	107,968	6,335	1,139,960	12,153	215,565,354	124,793,250
1856.....	23,794	52,104	13,634,892	3,908,700	207,745	2,575,908	9,392,200	2,828,759	83,601	6,266	4,267,956	16,161	243,387,732	115,563,250
1857.....	44,402	30,078	3,463,566	.....	309,550	1,062,881	8,609,200	1,537,946	90,918	10,654	2,214,398	25,942	311,698,783	154,827,750
1858.....	49,530	80,859	.....	5,280,000	512,853	1,038,674	8,892,892	4,027,846	191,279	28,007	3,442,870	15,641	242,783,268	150,129,250
1859.....	123,832	92,218	9,272,450	7,232,750	.....	934,565	18,413,220	4,647,960	237,847	29,529	8,725,747	16,896	226,120,389	195,117,700
1860.....	85,563	91,721	15,635,243	10,325,019	.....	889,269	14,853,514	6,055,563	172,963	65,228	8,892,066	20,364	225,873,340	168,302,525
1861.....	50,154	65,196	59,748,388	16,400,822	.....	1,360,617	12,277,518	7,438,485	319,140	100,170	16,854,706	12,917	180,277,079	94,421,186
1862.....	151,631	193,920	71,944,010	54,505,128	.....	2,101,514	15,315,859	6,165,221	579,694	159,312	11,607,753	15,245	221,709,330	102,634,447
1863.....	137,302	449,152	95,300,815	58,030,728	.....	3,435,967	27,656,226	11,792,656	483,443	138,644	6,853,633	16,779	260,486,579	136,497,256
1864.....	140,627	298,250	50,055,822	42,242,970	5,927,769	7,554,379	26,379,955	7,514,928	452,537	66,053	6,736,703	24,090	385,353,678	258,351,450
1865.....	109,064	294,734	56,028,609	28,755,368	5,503,821	12,391,963	29,234,791	13,316,210	452,537	66,053	6,433,218	24,090	422,313,266	422,339,715
1866.....	67,762	257,470	73,011,594	29,755,368	2,828,239	11,293,717	27,739,090	19,058,921	455,740	49,250	4,162,074	69,170	518,973,354	490,330,074
1867.....	94,622	176,821	82,825,622	27,211,225	8,972,021	13,101,162	29,310,038	15,870,950	534,014	69,535	7,942,740	83,399	551,980,808	537,497,074
1868.....	75,424	121,635	84,707,466	17,278,320	5,868,391	8,273,924	25,900,538	12,217,315	534,014	156,408	5,350,657	95,620	581,533,490	638,317,840
1869.....	65,369	165,865	112,433,168	41,292,249	6,483,143	15,826,536	27,245,846	6,297,615	571,013	176,508	5,855,471	110,467	583,490,634	606,247,775
1870.....	39,412	149,794	163,113,891	61,029,853	11,049,367	24,351,594	22,462,864	14,213,989	530,138	171,031	5,994,751	96,533	541,222,543	556,385,350
1871.....	39,911	208,064	245,288,404	86,040,785	11,497,537	27,720,069	28,060,292	22,462,864	513,650	169,564	10,842,717	177,867	417,827,573	436,827,375
1872.....	33,838	191,144	343,864,021	89,247,680	12,851,303	32,715,453	30,785,496	25,761,521	581,167	141,848	17,362,913	245,877	561,544,379	407,505,650
1873.....	72,562	321,350	362,861,462	80,900,867	16,020,190	39,342,721	40,730,931	43,161,623	683,292	162,917	18,126,506	292,572	580,673,674	370,196,661
1874.....	60,454	313,713	362,141,943	115,616,063	19,240,061	51,895,832	55,367,904	55,428,491	683,292	168,149	18,126,506	365,811	628,485,014	299,426,936
1875.....	73,575	344,344	467,289,109	139,216,376	34,140,609	61,145,966	50,102,027	82,344,295	779,676	139,545	20,917,469	249,362	576,124,287	214,329,575
1876.....	82,050	296,457	479,626,221	147,000,616	37,010,963	45,340,422	50,622,964	106,944,994	800,098	148,802	19,015,552	271,176	586,722,821	170,410,785
1877.....	67,757	346,366	747,269,774	244,323,933	44,507,569	43,000,697	51,875,447	95,441,270	841,093	154,605	22,772,000	305,994	626,735,118	123,233,000

APPENDIX No. 47.

Annual shipments of flour and grain from Chicago from 1833 to 1878. (Compiled from the most authentic sources.)

Calendar year.	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.	Total receipts (flour reduced to equivalent in wheat.)
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1838		78					78
1839		8,678					8,678
1840		10,000					10,000
1841		40,000					40,000
1842		588,907					588,907
1843		688,967					688,967
1844	8,320	891,894					922,494
1845	13,752	956,880					1,025,620
1846	28,045	1,459,584					1,599,819
1847	32,538	1,974,304	87,125	38,892			2,243,021
1848	45,200	2,160,000	550,480	65,280			3,001,740
1849	51,809	1,836,284	644,848	26,849			2,895,958
1850	109,871	883,644	262,013	158,084		31,452	1,830,968
1851	72,406	437,680	3,221,317	605,827		22,872	4,046,831
1852	61,196	635,966	2,757,011	2,030,317		19,997	5,826,437
1853	70,984	1,206,163	2,780,228	1,748,483		79,818	6,292,233
1854	111,627	2,306,925	6,837,890	3,239,987		120,267	13,132,501
1855	163,419	6,298,155	7,517,625	1,888,538		148,411	16,632,750
1856	216,389	8,364,420	11,129,668	1,014,637		92,011	21,610,312
1857	259,648	9,846,052	6,814,615	506,778		19,051	18,483,678
1858	470,402	8,850,257	7,726,264	1,519,069	7,569	17,993	20,587,189
1859	686,351	7,166,096	4,349,360	1,185,703		132,020	16,754,136
1860	698,132	12,402,197	13,700,113	1,091,068		486,218	31,108,759
1861	1,603,620	15,835,853	24,372,725	1,633,237		267,449	50,481,862
1862	1,739,849	13,808,898	29,452,610	3,112,866		393,813	56,477,110
1863	1,522,065	10,793,295	25,051,450	9,234,858		532,195	54,287,345
1864	1,285,343	10,250,026	12,235,452	10,567,650		651,064	46,718,543
1865	1,293,428	7,614,887	25,437,241	11,142,140		803,492	52,268,181
1866	1,981,325	10,118,907	32,753,181	9,961,215		999,289	65,486,323
1867	2,015,455	10,557,123	21,267,205	10,226,026	1,444,574	1,300,821	65,187,909
1868	2,399,619	10,374,683	24,770,626	14,440,830	1,213,389	1,846,891	63,688,358
1869	2,339,063	13,244,249	21,586,808	8,800,646	1,202,941	901,183	56,759,515
1870	1,705,977	16,432,585	17,777,377	8,507,735	798,744	633,753	54,745,903
1871	1,287,574	12,905,449	36,716,030	12,151,247	913,629	2,584,692	71,800,789
1872	1,361,328	12,160,046	47,013,552	12,255,537	1,325,867	2,903,113	83,364,224
1873	2,303,490	24,455,657	36,754,943	15,694,133	776,805	5,032,308	91,597,092
1874	2,308,576	27,634,587	32,705,224	10,561,673	960,613	8,366,041	84,020,691
1875	2,285,113	23,184,349	26,443,884	10,279,134	835,077	2,404,538	72,369,194
1876	2,634,838	14,361,650	45,629,035	11,271,642	310,592	1,868,206	87,241,306
1877	2,482,305	14,909,160	46,361,901	12,497,612	1,433,976	2,687,932	90,706,076
1878	2,779,640	24,211,739	59,944,200	16,464,513	1,553,375	4,213,656	118,675,299

APPENDIX No. 48.

RECEIPTS OF FLOUR AND GRAIN AT CHICAGO FOR TWENTY-SEVEN YEARS.

Aggregate annual receipts of flour and all kinds of grain in Chicago; also the amount of flour manufactured in the city for each year since 1851.

Year.	Flour manufactured in the city.	Flour received.	Wheat received.	Corn received.	Oats received.	Rye received.	Barley received.	Total receipts (flour reduced to equivalent in wheat.)
	<i>Barrels.</i>	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1852..	70, 979	53, 337	937, 496	2, 991, 011	2, 089, 941	21, 015	127, 028	6, 466, 568
1853..	82, 833	48, 297	1, 687, 465	2, 869, 339	1, 875, 770	86, 162	192, 387	6, 928, 459
1854..	66, 000	158, 575	3, 038, 955	7, 490, 753	4, 194, 385	85, 091	201, 704	15, 723, 135
1855..	79, 650	240, 662	7, 535, 097	8, 532, 377	2, 947, 188	68, 166	201, 896	20, 367, 702
1856..	86, 068	324, 921	8, 767, 780	11, 888, 398	2, 219, 987	45, 707	128, 457	24, 512, 454
1857..	96, 000	393, 934	10, 554, 781	7, 409, 000	1, 707, 245	87, 711	127, 698	31, 659, 100
1858..	140, 403	522, 137	9, 639, 614	8, 252, 641	2, 883, 597	71, 012	413, 812	23, 610, 233
1859..	161, 500	726, 321	8, 060, 766	5, 401, 870	1, 757, 096	231, 514	652, 606	19, 372, 806
1860..	232, 000	713, 348	14, 927, 083	15, 862, 394	2, 198, 889	318, 976	617, 619	37, 235, 027
1861..	291, 852	1, 479, 284	17, 385, 002	26, 369, 989	2, 067, 018	490, 969	457, 589	53, 427, 365
1862..	260, 980	1, 666, 391	13, 978, 116	29, 574, 328	4, 688, 722	1, 038, 825	872, 058	57, 650, 804
1863..	236, 261	1, 424, 208	11, 408, 161	26, 611, 653	11, 096, 131	865, 508	1, 290, 342	57, 090, 722
1864..	255, 056	1, 205, 698	12, 184, 977	13, 807, 745	16, 351, 616	1, 060, 116	1, 018, 813	49, 848, 908
1865..	288, 820	1, 134, 100	9, 296, 410	25, 952, 201	11, 650, 080	1, 194, 834	1, 774, 139	54, 960, 114
1866..	445, 522	1, 847, 145	11, 978, 753	33, 543, 001	11, 140, 264	1, 679, 541	1, 742, 632	68, 396, 423
1867..	574, 096	1, 720, 001	13, 095, 244	22, 772, 715	12, 355, 006	1, 291, 821	2, 360, 984	60, 215, 774
1868..	732, 479	2, 192, 413	14, 772, 094	25, 570, 494	16, 032, 910	1, 523, 820	1, 915, 056	69, 690, 233
1869..	543, 285	2, 218, 822	16, 876, 760	23, 475, 800	10, 611, 940	955, 201	1, 518, 110	63, 417, 510
1870..	443, 967	1, 766, 037	17, 394, 409	20, 189, 775	10, 472, 078	1, 093, 493	3, 335, 638	60, 432, 574
1871..	327, 739	1, 412, 177	14, 439, 656	41, 853, 138	14, 789, 414	2, 011, 788	4, 069, 410	53, 518, 202
1872..	180, 968	1, 532, 014	12, 724, 141	47, 366, 087	15, 061, 715	1, 129, 086	5, 251, 750	68, 426, 841
1873..	264, 363	2, 487, 376	26, 266, 562	38, 157, 232	17, 888, 724	1, 189, 464	4, 240, 239	96, 935, 413
1874..	244, 667	2, 696, 679	29, 764, 622	35, 799, 638	13, 901, 235	791, 182	3, 354, 981	95, 611, 713
1875..	249, 653	2, 625, 883	24, 206, 370	28, 341, 150	12, 916, 428	699, 583	3, 107, 297	81, 087, 302
1876..	271, 074	2, 955, 197	16, 574, 058	48, 698, 640	13, 030, 121	1, 447, 917	4, 716, 360	97, 735, 482
1877..	293, 244	2, 691, 142	14, 164, 515	47, 915, 728	13, 506, 773	1, 728, 865	4, 990, 379	94, 416, 999
1878..	308, 284	3, 030, 562	29, 713, 577	63, 651, 518	18, 839, 297	2, 490, 615	5, 754, 059	134, 069, 596

Receipts at Chicago of the last twenty-four crops of wheat.

Received.	Quantity.	Received.	Quantity.	Year har- vested.	Total quantity.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
From August 1 to December 31, 1854.	1, 385, 177	From January 1 to July 31, 1855.	1, 154, 299	1854	2, 539, 476
From August 1 to December 31, 1855.	6, 380, 798	From January 1 to July 31, 1856.	2, 002, 776	1855	8, 383, 574
From August 1 to December 31, 1856.	6, 764, 984	From January 1 to July 31, 1857.	2, 170, 434	1856	8, 935, 418
From August 1 to December 31, 1857.	8, 384, 327	From January 1 to July 31, 1858.	5, 700, 846	1857	14, 085, 173
From August 1 to December 31, 1858.	3, 938, 768	From January 1 to July 31, 1859.	1, 465, 828	1858	5, 404, 596
From August 1 to December 31, 1859.	6, 594, 938	From January 1 to July 31, 1860.	2, 360, 728	1859	8, 955, 666
From August 1 to December 31, 1860.	12, 066, 354	From January 1 to July 31, 1861.	5, 820, 345	1860	17, 886, 699
From August 1 to December 31, 1861.	11, 364, 657	From January 1 to July 31, 1862.	6, 416, 802	1861	17, 781, 459
From August 1 to December 31, 1862.	7, 311, 314	From January 1 to July 31, 1863.	7, 520, 615	1862	14, 831, 929
From August 1 to December 31, 1863.	7, 110, 041	From January 1 to July 31, 1864.	6, 770, 187	1863	13, 880, 228

Receipts at Chicago of the last twenty-four crops of wheat—Continued.

Received.	Quantity.	Received.	Quantity.	Year har-vested.	Total quantity.
	<i>Bushels.</i>		<i>Bushels.</i>		<i>Bushels.</i>
From August 1 to December 31, 1864.	5,317,790	From January 1 to July 31, 1865.	4,348,414	1864	9,666,204
From August 1 to December 31, 1865.	4,892,996	From January 1 to July 31, 1866.	3,613,962	1865	8,506,958
From August 1 to December 31, 1866.	8,667,786	From January 1 to July 31, 1867.	2,037,087	1866	10,704,873
From August 1 to December 31, 1867.	11,275,162	From January 1 to July 31, 1868.	3,511,699	1867	14,786,861
From August 1 to December 31, 1868.	11,245,395	From January 1 to July 31, 1869.	7,610,926	1868	18,856,321
From August 1 to December 31, 1869.	9,265,834	From January 1 to July 31, 1870.	7,185,365	1869	16,451,199
From August 1 to December 31, 1870.	10,209,044	From January 1 to July 31, 1871.	5,296,041	1870	15,495,085
From August 1 to December 31, 1871.	9,153,615	From January 1 to July 31, 1872.	2,533,706	1871	11,687,321
From August 1 to December 31, 1872.	10,190,435	From January 1 to July 31, 1873.	7,338,150	1872	17,528,585
From August 1 to December 31, 1873.	18,928,412	From January 1 to July 31, 1874.	16,210,067	1873	35,138,497
From August 1 to December 31, 1874.	13,554,555	From January 1 to July 31, 1875.	12,206,732	1874	25,761,287
From August 1 to December 31, 1875.	11,999,638	From January 1 to July 31, 1876.	8,355,710	1875	20,355,348
From August 1 to December 31, 1876.	8,218,348	From January 1 to July 31, 1877.	1,921,017	1876	10,139,365
From August 1 to December 31, 1877.	12,243,498	From January 1 to July 31, 1878.	11,584,302	1877	23,827,800
From August 1 to December 31, 1878.	18,129,275				

APPENDIX No. 49.

Movement of flour and grain at Chicago during the year 1878.

(Shipments from Milwaukee passing through Chicago not included.)

RECEIPTS.

Received by—	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Lake	15,531	8,415			100	721
Illinois and Michigan Canal	57,551	40,027	5,757,616	797,749	78,700	2,450
Chicago and Northwestern						
Railway	964,809	9,941,454	6,996,256	5,004,832	338,505	1,701,281
Illinois Central Railroad	158,902	2,451,669	8,306,047	3,007,225	322,881	244,482
Chicago, Rock Island and						
Pacific Railroad	75,342	3,248,065	11,081,450	1,974,075	877,198	273,750
Chicago, Burlington and						
Quincy Railroad	427,292	8,635,066	23,179,234	5,696,893	1,005,551	2,316,701
Chicago and Alton Railroad	77,283	1,963,665	6,966,230	919,650	233,100	66,900
Chicago and Eastern Illinois						
Railroad	36,724	104,620	1,207,160	195,462	47,480	
Chicago, Milwaukee and						
Saint Paul Railway	1,204,374	3,309,040	78,650	738,450	68,000	1,024,170
Chicago and Pacific Rail-						
road	390	4,055	111,284	498,391	17,277	6,778
Michigan Central Railroad	6,307	8,510	8,337	1,416		38,751
Lake Shore and Michigan						
Southern Railway	2,756	3,020	2,026	254	1,342	30,619
Pittsburgh, Fort Wayne and						
Chicago Railway	1,000	400	2,900	2,800		17,700
Pittsburgh, Cincinnati and						
Saint Louis Railway	1,898	350	3,955	2,100	460	28,370
Baltimore and Ohio Railroad	403	221	373		21	1,398
Total receipts	3,030,562	29,713,577	63,651,518	18,839,297	2,490,615	5,754,659
Flour manufactured in the						
city	308,284					
In store and in vessels De-						
cember 31, 1877	78,049	1,570,546	823,712	208,642	90,559	623,387
Total	3,416,895	31,284,123	64,475,230	19,047,939	2,581,174	6,377,446

SHIPMENTS.

Shipped by—	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Lake—To Buffalo	205,086	9,993,646	32,746,386	4,243,747	1,552,533	563,569
To Oswego	341	18,000	643,647			14,000
To Ogdensburg	2,424	69,837	1,974,582	76,122	22,000	
To Erie	36,397	1,466,038	2,652,249	88,000		1,496
To other American						
ports	72,500	135,517	3,478,203	976,229	250	137,223
To Montreal	3,740	419,206	770,288			
To Kingston		396,109	1,092,112	120,196		31,662
To other Canadian						
ports	1,100	405,078	2,111,186	750,707	31,836	
Total by lake	321,618	12,903,481	46,368,653	6,255,003	1,606,639	753,943
Illinois and Michigan Canal	1,336	501,914	38,465	10,234		
Chicago and Northwestern						
Railway	10,021	329,130	14,714	5,929	2,288	370,302
Illinois Central Railroad	21,140	14,604	4,891	5,527	81,666	110,534
Chicago, Rock Island and						
Pacific Railroad	12,142	14,812	3,270		1,216	63,648
Chicago, Burlington and						
Quincy Railroad	5,485	44,205	2,883	2,956	1,881	100,863
Chicago and Alton Railroad	14,090	52,338	720			134,000
Chicago and Eastern Illinois						
Railroad	16,193	6,009	781	11,853	863	73,563
Chicago, Milwaukee and						
Saint Paul Railway	3,077	341,882	5,365	4,125	429	105,061

Movement of flour and grain at Chicago during the year 1878—Continued.

Shipped by—	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Chicago and Pacific Railroad	2, 285	3, 884				
Michigan Central Railroad	775, 401	4, 844, 480	4, 702, 534	3, 698, 065	145, 532	629, 171
Lake Shore and Michigan Southern Railway	730, 946	2, 064, 821	4, 173, 517	4, 019, 722	93, 121	219, 935
Pittsburgh, Fort Wayne and Chicago Railway	655, 065	1, 973, 295	2, 895, 438	1, 489, 731	96, 600	709, 558
Pittsburgh, Cincinnati and Saint Louis Railway	152, 076	501, 388	536, 761	239, 630	16, 870	200, 060
Baltimore and Ohio Railroad	58, 135	534, 896	1, 196, 208	722, 234	28, 347	148, 103
Total shipments	2, 779, 640	24, 211, 739	59, 944, 200	16, 464, 513	2, 025, 654	3, 520, 983
In store and vessels December 31, 1878	89, 187	5, 740, 152	2, 621, 184	486, 559	241, 593	1, 153, 962
City consumption and unaccounted for	548, 068	1, 332, 232	1, 909, 846	2, 096, 867	313, 927	1, 702, 501
Total	3, 416, 895	31, 284, 123	64, 475, 230	19, 047, 939	2, 581, 174	6, 377, 446

APPENDIX No. 50.

Amount of freight received at Saint Louis by each railroad and river for five years.

Routes.	1878.	1877.	1876.	1875.	1874.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Missouri Pacific Railroad	413, 302	354, 513	416, 415	229, 447	328, 201
Saint Louis and San Francisco Railway	191, 834	178, 280	173, 950	196, 968	196, 891
Saint Louis, Kansas City and Northern Railroad	460, 776	350, 113	376, 290	266, 091	233, 159
Saint Louis, Iron Mountain and Southern Railroad	353, 172	340, 740	325, 097	451, 225	292, 842
Missouri, Kansas and Texas Railroad	78, 652	109, 864	110, 773	53, 885	65, 734
Belleville and Southern Illinois Railroad	363, 739	380, 204	376, 488	406, 653	362, 470
Saint Louis and Southeastern Railroad	223, 248	257, 536	230, 707	221, 634	216, 898
Cairo and Saint Louis Railroad	63, 885	89, 435	107, 984	103, 808	82, 470
Ohio and Mississippi Railroad	262, 952	243, 496	268, 073	280, 557	319, 217
Chicago, Alton and Saint Louis Railroad	191, 020	136, 977	167, 525	184, 834	195, 691
Indianapolis and Saint Louis Railroad	128, 568	135, 487	128, 208	134, 634	134, 498
Saint Louis, Vandalia, Terre Haute and Indiana Railroad	402, 252	392, 185	372, 314	319, 658	276, 138
Wabash Railroad	264, 831	169, 930	104, 319	108, 940	118, 481
Chicago, Burlington and Quincy Railroad (Saint Louis division)	142, 836	65, 098	57, 554	60, 993	107, 151
Illinois and Saint Louis Railroad	224, 240	260, 530	215, 523	213, 443	215, 232
Upper Mississippi River	174, 065	136, 715	224, 860	198, 100	231, 060
Lower Mississippi River	174, 180	149, 825	147, 285	128, 120	170, 120
Illinois River	124, 785	104, 200	129, 940	153, 995	192, 770
Missouri River	56, 040	49, 645	50, 345	30, 160	44, 830
Ohio, Cumberland, and Tennessee Rivers	185, 630	204, 100	136, 325	153, 150	93, 985
Total in tons	4, 500, 097	4, 108, 873	4, 110, 975	3, 896, 295	3, 867, 858
Total by rail	3, 785, 307	3, 464, 388	3, 431, 220	3, 232, 770	3, 165, 093
Total by river	714, 790	644, 485	688, 755	663, 525	732, 765

APPENDIX No. 51.

Amount of freight shipped from Saint Louis by each railroad and river for five years.

Routes.	1878.	1877.	1876.	1875.	1874.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Missouri Pacific Railroad	198,955	202,966	203,169	151,980	171,987
Saint Louis and San Francisco Railway	44,495	45,898	51,150	34,881	30,133
Saint Louis, Kansas City and Northern Railroad ..	168,746	153,066	148,845	130,446	94,289
Saint Louis, Iron Mountain and Southern Railroad ..	222,641	215,781	193,833	211,725	155,161
Missouri, Kansas and Texas Railroad	45,039	47,523	45,131	40,635	39,337
Belleville and Southern Illinois Railroad	68,027	66,992	38,909	76,092	37,753
Saint Louis and Southeastern Railroad	49,416	29,350	30,249	25,944	44,845
Cairo and Saint Louis Railroad	12,405	11,806	4,970	13,961	13,968
Ohio and Mississippi Railroad	136,677	144,065	207,905	108,998	145,914
Chicago, Alton and Saint Louis Railroad	256,444	174,454	149,285	135,647	97,885
Indianapolis and Saint Louis Railroad	157,644	183,817	217,786	138,307	175,389
Saint Louis, Vandalia, Terre Haute and Indiana Railroad	190,685	142,713	140,178	137,884	139,831
Wabash Railway	279,753	199,241	201,580	74,837	62,618
Chicago, Burlington and Quincy Railroad (Saint Louis division)	45,829	30,590	21,423	12,754	11,546
Illinois and Saint Louis Railroad	7,803	4,637	5,637	7,359	10,000
Upper Mississippi River	67,320	68,565	93,360	96,225	95,800
Lower Mississippi River	434,490	426,725	379,970	368,715	474,510
Illinois River	18,300	16,420	20,560	18,470	13,740
Missouri River	22,465	23,185	19,360	25,100	20,390
Ohio, Cumberland, and Tennessee Rivers	72,100	62,775	86,975	130,585	102,885
Total in tons	2,495,234	2,250,520	2,260,175	1,940,545	1,938,001
Total by rail	1,880,559	1,652,850	1,659,950	1,301,450	1,230,676
Total by river	614,675	597,670	600,225	639,095	707,325

APPENDIX No. 53.

Stocks of grain in store at Saint Louis at the close of each year in public elevators and private hands.

Years.	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1866	285,809	40,000	20,000		52, (44)
1867	174,874	35,060	42,822	2,250	24,149
1868	76,849	31,153	81,729	20,234	68,537
1869	437,115	21,878	69,677	16,331	101,537
1870	329,746	19,763	89,702	3,243	62,916
1871	525,977	124,921	238,087	48,601	66,212
1872	637,388	181,115	178,537	134,645	139,625
1873	219,108	159,463	111,016	19,006	43,826
1874	516,154	188,284	104,824	2,442	109,320
1875	772,896	412,598	89,078	26,589	117,115
1876	510,956	553,072	154,202	50,954	199,686
1877	413,495	290,845	31,470	35,027	93,999
1878	437,149	402,504	37,213	42,720	219,433

APPENDIX No. 54.

Flour and grain received at Saint Louis for 1878, and sources of supply.

By—	Flour.	Wheat.	Corn.	Oats.	Rye.	Barley.
	<i>Barrels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
Saint Louis and San Francisco Railroad.						
Missouri Pacific Railroad	345,692	9,448,649	6,571,522	1,623,628	702,191	457,586
Saint Louis, Kansas City and Northern Railroad.						
Missouri River boats						
Iron Mountain Railroad	42,354	1,353,495	619,631	23,670	9,051	17,139
Missouri, Kansas and Texas Railroad						
Lower Mississippi boats						
Belleville and Southern Illinois Railroad.						
Saint Louis and Southeastern Railroad.	532,073	624,273	25,535	2,218	575	336
Cairo and Saint Louis Railroad						
Ohio River boats						
Ohio and Mississippi Railroad						
Chicago and Alton Railroad						
Indianapolis and Saint Louis Railroad						
Vandalia line	269,414	1,306,472	1,209,536	474,103	52,504	289,067
Wabash Railway						
Illinois and Saint Louis Railroad.						
Illinois River boats						
Chicago, Burlington and Quincy Railroad, Saint Louis division.	70,171	747,106	390,320	1,707,291	63,184	644,387
Upper Mississippi River boats.						
Wagons from near the city.	45,632	845,436	193,179	51,366	18,337	12,255
Total receipts	1,305,336	14,325,431	9,009,723	3,882,276	845,933	1,517,292

APPENDIX No. 55.

Receipts and manufactures of flour at Saint Louis for twenty-eight years, and exports for fourteen years.

Years.	Receipts.	Manufactures.	Exports.	Years.	Receipts.	Manufactures.	Exports.
	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>		<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>
1831.....	184,715	408,099		1865.....	1,161,038	743,281	1,521,463
1832.....	132,050	383,184		1866.....	1,208,726	818,300	1,700,740
1833.....	201,487	455,076		1867.....	944,075	765,298	1,450,475
1834.....	192,945	503,157		1868.....	805,836	895,154	1,499,337
1835.....	226,450	603,333		1869.....	1,210,555	1,068,502	2,172,761
1836.....	323,446	678,496		1870.....	1,491,626	1,351,773	1,790,739
1837.....	573,664	662,548		1871.....	1,428,408	1,507,915	2,676,525
1838.....	687,431	825,651		1872.....	1,259,933	1,494,798	2,247,040
1839.....	484,715	663,446		1873.....	1,296,457	1,420,287	2,506,215
1840.....	443,106	839,185		1874.....	1,683,898	1,573,202	2,981,760
1841.....	484,000	694,110		1875.....	1,300,391	1,484,821	2,480,677
1842.....	647,419	906,860		1876.....	1,071,434	1,441,944	2,217,578
1843.....	680,242	758,422		1877.....	1,157,832	1,517,921	2,295,657
1844.....	815,144	782,560		1878.....	1,305,336	1,916,290	2,670,740

APPENDIX No. 56.

Amount of flour handled by millers and dealers at Saint Louis for eight years.

	1878.	1877.	1876.	1875.	1874.	1873.	1872.	1871.
	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	<i>Barrels.</i>
Received.....	1,305,336	1,157,932	1,071,434	1,300,381	1,683,898	1,296,457	1,259,933	1,428,408
Manufactured.....	1,916,290	1,517,921	1,441,944	1,484,821	1,573,202	1,420,287	1,294,798	1,507,915
Sold and shipped direct from county mills.....	412,246	262,475	254,596	304,721	228,789	324,891	440,631	364,043
Total.....	3,633,872	2,938,328	2,767,974	3,089,923	3,485,889	3,041,635	2,995,362	3,300,366

APPENDIX No. 57.

Receipts and shipments of flour at Saint Louis for two years, and sources of supply and direction of shipment.

RECEIPTS.			SHIPMENTS.		
By—	1877.	1878.	Direction.	1877.	1878.
Eastern railroads	232,387	184,536	Southward by boat	565,475	565,744
Illinois River	13,732	5,317	Southward by rail	483,812	450,913
Western railroads	279,687	315,833	Eastward by rail	1,199,985	1,612,939
Missouri River	4,173	9,859	Eastward by boat	23,717	8,845
Southern railroads *	468,590	622,129	Westward by boat and rail ..	7,928	6,950
Lower river boats	36,828	31,859	To local points	14,740	21,459
Northern railroads	19,497	30,225			
Upper river boats	38,279	39,946	Total	2,295,657	2,670,740
From local points	64,750	45,632			
Total	1,157,932	1,305,336			

* Mostly from Southern Illinois.

APPENDIX No. 58.

Receipts and shipments of cotton at Saint Louis by each route, for the cotton year ending August 31, 1878.

Routes.	Receipts.	Shipments
	<i>Bales.</i>	<i>Bales.</i>
Saint Louis, Iron Mountain and Southern Railroad	225,194	1,569
Missouri, Kansas and Texas Railroad	8,097	
Saint Louis and San Francisco Railroad	5,209	
Belleville and Southern Illinois Railroad	354	1,452
Missouri Pacific Railroad	2	353
Saint Louis, Kansas City and Northern Railroad	2	3
Saint Louis and Southeastern Railroad		743
Ohio and Mississippi Railroad		32,563
Chicago, Alton and Saint Louis Railroad		49,050
Indianapolis and Saint Louis Railroad		41,345
Vandalia Railway		42,394
Wabash Railway		56,570
Chicago, Burlington and Quincy (Saint Louis Division) Railroad ..		3,752
Upper Mississippi River boats		181
Lower Mississippi River boats	9,998	6,468
Illinois River boats		10
Ohio River boats		2,500
Totals	248,856	240,644

	1877-78.	1876-77.	1875-76.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
Gross receipts	248,856	217,734	244,586
Shipped via Saint Louis on through bills lading to Eastern or foreign markets	61,561	69,258	64,788
Net amount handled by Saint Louis factors	187,295	148,476	159,810

NOTE.—In the warehouse statements, all through cotton going into warehouse for compressing is included in their receipts and shipments; consequently the amount handled in our warehouses is greater than the amount sold in this market.

APPENDIX No. 59.

Receipts, exports, stock, and consumption of cotton at Saint Louis for six years.

	1877-'78.	1876-'77.	1875-'76.	1874-'75.	1873-'74.	1872-'73.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
Receipts	248,856	217,734	244,598	133,969	103,741	59,709
Stock on hand September 1	1,501	2,220	255	2,530	964	127
Total	250,357	219,954	244,853	136,499	104,705	59,836
Exports	240,604	212,835	235,462	128,640	92,218	51,795
City consumption	6,579	4,858	4,696	6,328	6,300	5,068
In public warehouses	825	1,501	2,220	255	2,530	964
Unaccounted for	2,349	760	2,473	1,276	3,657	2,009
Total	250,357	219,954	244,853	136,499	104,705	59,836

APPENDIX No. 60.

Warehouse statement of Saint Louis for four years.

	1877-'78.	1876-'77.	1875-'76.	1874-'75.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
Stock September 1	1,501	2,220	246	2,509
Received during the year	205,861	167,927	159,810	94,398
Total	207,362	170,147	160,056	96,817
Shipments during the year	206,537	168,646	157,836	96,571
Stock in store August 31	825	1,501	2,220	246
Total	207,362	170,147	160,056	96,817

APPENDIX No. 61.

Receipts of cotton at Saint Louis for eleven years.

Years.	Bales.	Years.	Bales.
1877-'78	248,856	1871-'72	36,421
1876-'77	217,734	1870-'71	29,770
1875-'76	244,598	1869-'70	18,318
1874-'75	133,909	1868-'69	16,696
1873-'74	103,741	1867-'68	39,024
1872-'73	59,709	1866-'67	19,838

APPENDIX No. 62.

Foreign shipments of cotton from Saint Louis during the year 1878.

	Bales.		Bales.
To Liverpool	121,148	To Bremen	1,655
To Hamburg	1,510	To Antwerp	550
To New York for export	100		
To Havre	4,257	Total	129,821
To Genoa	1,201		

APPENDIX No. 63.

Receipts and shipments at Saint Louis of the hog product, also sources of supply and direction of shipments for 1878. Totals for three years.

By—	Receipts.				Shipments.			
	Pork.	Hams.	Meats.	Lard.	Pork.	Hams.	Meats.	Lard.
Missouri Pacific Railway	Barrels.	Pounds.	Pounds.	Pounds.	Barrels.	Pounds.	Pounds.	Pounds.
San Francisco Railway	376	241,158	7,385,805	1,629,867	33	2,083,716	1,106,344	184,143
Kansas City and Northern Railway	4,099	1,165,850	82,599	32,523	29	79,607	205,275	8,300
Iron Mountain Railway		23,814	18,962,016	2,751,475		430,515	108,375	2,700
Missouri, Kansas and Texas Railway	1	9,870	56,913	37,566	5,548	2,490,650	42,465,430	5,053,185
Belleville and Southern Railway		2,895	11,720	12,201	48	342,494	2,124,246	285,780
Southwestern Railway			28,223	9,048	2,079	675,473	20,800,499	506,675
Cairo and Saint Louis Railway			9,893	97,995	346	102,227	5,366,968	140,411
Ohio and Mississippi Railway			350	7,292	130	11,484	222,941	107,531
Chicago and Alton Railway	20	94,239	155,103	6,760	576	983,207	1,327,375	3,582,933
Indianapolis and Saint Louis Railway	9,786	345,995	8,706,898	144,777		18,761	4,875	1,492,049
Vandalia Railway	2,916	801,288	20,000	97,730	1,366	2,500,290	4,333,925	5,287,458
Chicago, Burlington and Quincy Railway	8,672	190,800	1,582,000	51,720	705	5,442,459	1,615,057	7,200,758
Illinois and Saint Louis Railway	13,345	96,112	6,535,725	132,647	4,913	1,003,119	2,363,637	7,384,904
Upper Mississippi River boats	3,295		10,105,681	1,207,050	6	29,218	76,885	76,414
Lower Mississippi River boats				107,300		23,513	111,900	21,500
Illinois River boats	7,460	355,854	1,557,975	392,895	253	6,451	75,637	20,750
Missouri River boats	312	59,351	1,125,831	67,917	95,882	2,474,405	23,800,543	8,997,054
Missouri River boats	1,705	43,150	57,840	154,050	211	81,837	120,907	3,460
Ohio, Cumberland, and Tennessee River boats	13	35,310	189,100	82,318	10	8,771	31,915	1,725
Total 1878	52,200	2,969,401	55,641,663	7,019,741	112,375	19,175,869	106,426,219	40,452,505
Total 1877	45,482	2,310,577	43,893,295	7,087,001	108,768	16,736,734	103,218,048	34,725,726
Total 1876	45,632	50,290,716	6,067,325	6,067,325	87,683	107,118,076		29,354,879

From—	Receipts.				Shipments.			
	Pork.	Hams.	Meats.	Lard.	Pork.	Hams.	Meats.	Lard.
West	Barrels.	Pounds.	Pounds.	Pounds.	Barrels.	Pounds.	Pounds.	Pounds.
East and Northeast	4,480	1,443,263	28,811,240	4,496,183	95,982	2,474,405	23,800,543	8,997,054
South	36,644	976,262	17,147,557	691,584	8,151	3,712,328	71,000,044	6,101,592
North	312	97,920	232,039	232,039	7,911	10,340,858	9,941,181	25,059,827
	10,755	451,946	1,599,835	1,599,835	72	2,612,609	1,451,909	106,863
Total	52,200	2,969,401	55,641,663	7,019,741	112,375	19,175,869	106,426,219	40,452,505

RECAPITULATION OF RECEIPTS AND SHIPMENTS, 1878.

APPENDIX No. 64.

Receipts and exports of hog product at Saint Louis.

RECEIPTS FOR EIGHTEEN YEARS.				EXPORTS FOR FOURTEEN YEARS.			
Years.	Pork.	Hams and meats.	Lard.	Years.	Pork.	Hams and meats.	Lard.
	<i>Barrels.</i>	<i>Pounds.</i>	<i>Pounds.</i>		<i>Barrels.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1878.....	52,200	58,611,064	7,019,741	1878.....	112,375	125,602,088	40,452,745
1877.....	45,482	48,203,972	7,087,001	1877.....	108,768	119,955,882	34,725,726
1876.....	45,632	50,290,716	6,067,325	1876.....	86,141	106,803,076	28,292,879
1875.....	46,547	51,556,146	6,732,320	1875.....	95,503	107,809,598	24,145,176
1874.....	55,453	52,104,380	6,877,560	1874.....	90,343	133,486,340	27,112,270
1873.....	57,476	50,071,760	8,981,820	1873.....	105,876	184,392,770	37,156,810
1872.....	60,207	63,434,860	11,288,890	1872.....	114,329	147,141,960	33,943,860
1871.....	88,442	57,804,350	10,093,460	1871.....	131,732	123,665,060	30,750,470
1870.....	77,396	44,494,770	6,215,150	1870.....	115,236	77,501,130	15,507,840
1869.....	78,236	47,225,140	7,778,410	1869.....	120,002	75,755,450	13,322,960
1868.....	85,127	46,753,360	5,941,650	1868.....	130,268	58,229,270	12,945,490
1867.....	92,071	47,623,450	7,229,670	1867.....	138,226	70,095,130	14,318,210
1866.....	56,740	31,278,150	5,004,870	1866.....	92,585	49,897,050	7,462,230
1865.....	66,822	34,781,570	6,391,030	1865.....	109,702	64,910,870	9,569,830
1864.....	71,539	45,291,770	9,057,250				
1863.....	34,256	49,387,870	9,501,930				
1862.....	51,187	40,340,850	11,502,940				
1861.....	116,445	54,277,390	12,252,734				

APPENDIX No. 65.

Pork-packing at Saint Louis for seventeen seasons.

Seasons.	Number hogs.	Average weight.	Average yield of lard, all kinds.	Years.	Number hogs.	Average weight.
		<i>Pounds, net.</i>	<i>Pounds.</i>			<i>Pounds, net.</i>
1877-'78.....	509,540	216.02	38.20	1868-'69.....	231,937	188.57
1876-'77.....	414,747	255	32.55	1867-'68.....	237,160	193.91
1875-'76.....	329,895	268.47	36.56	1866-'67.....	185,543	222.34
1874-'75.....	462,246	240	30	1865-'66.....	123,335	208.91
1873-'74.....	463,793	261.53	34.18	1864-'65.....	191,890	178.50
1872-'73.....	538,000	290	34.50	1863-'64.....	244,600	179
1871-'72.....	419,032	263.15	35.17	1862-'63.....	178,750	207
1870-'71.....	305,600	216		1861-'62.....	89,093	224.56
1869-'70.....	241,316	190.50				

APPENDIX No. 66.

Summer pork-packing at Saint Louis.

Years.	Hogs.	Average gross weight.
	<i>Number.</i>	<i>Pounds.</i>
1878	142,000	255
1877	102,353	247
1876	90,351	226.43
1875	102,424	220
1874	150,962	209
1873	132,155	244.26
1872	98,720	233.63

APPENDIX No. 67.

Winter pork-packing in the West for thirteen seasons, as reported by the Cincinnati Price Current

Seasons.	Hogs.	Net weight per hog.	Yield of lard per hog, all kinds.	Cost per 100 pounds, net.
	<i>Number.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Cents.</i>
1865-'66	1,785,955	231.80	41.52	.....
1866-'67	2,490,791	232.14	39.66	.....
1867-'68	2,781,084	201	29	.....
1868-'69	2,499,873	206.75	32.33	.....
1869-'70	2,635,312	205.75	31.83	.....
1870-'71	3,695,251	230.14	40.19	.....
1871-'72	4,831,558	227.62	38.54	.....
1872-'73	5,410,314	232.43	40.08	.....
1873-'74	5,466,200	214.97	35.02	.....
1874-'75	5,566,226	209.77	34.20	.....
1875-'76	4,880,135	217.71	35.45	8.82
1876-'77	5,101,308	215.92	34.08	7.18
1877-'78	6,505,446	226.04	38.61	4.90

APPENDIX No. 68.

Summer pork-packing in the West from March 1 to November 1.

Seasons.	Hogs.	Average net weight.	Average yield lard.
	<i>Number.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1875	1,262,343	177.32	29.25
1876	2,307,866	184.10	30.25
1877	2,543,120	190.57	33.56

APPENDIX No. 69.

Receipts of live stock in Saint Louis during the year 1876.

Received by—	Cattle.	Hogs.	Sheep.	Horses and mules.
	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>
Missouri Pacific Railway	69,923	225,200	25,168	623
Saint Louis and San Francisco Railroad	66,469	131,883	30,690	349
Saint Louis, Kansas City and Northern Railroad	86,316	425,905	33,078	8,787
Saint Louis and Iron Mountain Railroad	53,553	30,409	13,324	873
Missouri, Kansas and Texas Railroad	73,889	187,168	13,008	193
Belleville and Southern Railroad	862	4,640	1,619	377
Saint Louis and Southeastern Railroad	1,917	22,106	1,746	153
Cairo and Saint Louis Railroad	426	585	500	1
Ohio and Mississippi Railroad	1,814	23,459	1,686	1,120
Chicago, Alton and Saint Louis Railroad	5,356	84,205	3,973	3,333
Indianapolis and Saint Louis Railroad	3,690	40,208	6,110	2,443
Saint Louis, Vandalia, Terre Haute and Indianapolis Railroad	3,272	29,326	4,250	2,520
Wabash Railroad	2,790	56,658	1,425	1,146
Chicago, Burlington and Quincy Railroad (Saint Louis Division)	6,142	74,814	4,934	1,067
Upper Mississippi River boats	13,263	54,970	11,105	3,423
Lower Mississippi River boats	2,098	8,373	3,219	208
Illinois River boats	2,816	24,188	1,266	729
Missouri River boats	2,588	26,963	1,900	132
Ohio, Cumberland and Tennessee	60			162
Driven in from country	9,042	2,520	9,094	
Totals	406,235	1,451,634	168,095	27,878

APPENDIX No. 70.

Shipments of live stock at Saint Louis during the year 1878.

	Cattle.	Hogs.	Sheep.	Horses and mules.
	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>
Westward by rail.....	872	943	2,378	6,708
Southward by rail.....	1,299	2,125	3,486	8,230
Southward by boat.....	1,652	997	1,022	5,769
Eastward by rail.....	255,376	524,448	65,492	8,541
To local points.....	2,524	114	2,055	1,579
Total	261,723	528,627	71,433	30,867

APPENDIX No. 71

Receipts and shipments of cattle, sheep, and hogs at Saint Louis for fourteen years.

Years.	Receipts.				Shipments.			
	Cattle.	Sheep.	Hogs.	Horses and mules.	Cattle.	Sheep.	Hogs.	Horses and mules.
	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>	<i>Head.</i>
1878.....	406,235	168,095	1,451,634	27,878	261,723	71,433	528,627	30,867
1877.....	411,969	200,502	896,319	22,652	251,566	87,569	314,287	25,157
1876.....	349,043	157,831	877,160	22,271	220,430	67,886	232,876	26,301
1875.....	335,742	125,679	628,569	27,516	216,701	37,784	126,729	28,675
1874.....	360,925	114,913	1,126,586	27,175	226,678	35,577	453,710	30,202
1873.....	279,678	86,434	973,512	.....	180,662	18,902	224,873	.....
1872.....	263,404	115,904	759,076	.....	164,870	29,540	188,700	.....
1871.....	199,527	118,899	633,370	.....	130,018	37,465	113,913	.....
1870.....	201,422	94,477	310,850	.....	129,748	11,649	17,156	.....
1869.....	124,565	96,626	344,848	.....	59,867	12,416	39,076	.....
1868.....	115,352	79,315	301,560	.....	37,277	6,415	16,277	.....
1867.....	74,146	62,974	298,241	.....	26,799	19,022	28,627	.....
1866.....	103,259	64,047	217,622	.....	24,462	15,194	13,368	.....
1865.....	94,307	52,133	99,663	.....	46,712	8,680	17,869	.....

APPENDIX No. 72.

Shipments from Saint Louis by New Orleans boats during the years 1871 to 1878, inclusive.

Years.	Apples.	Ale and beer.	Bagging.	Barley.	Butter.	Bran.	Cattle.	Corn.	
	<i>Bbls.</i>	<i>Pkgs.</i>	<i>Pieces.</i>	<i>Sacks.</i>	<i>Lbs.</i>	<i>Sacks.</i>	<i>Head.</i>	<i>Sacks.</i>	<i>Bush.</i>
1878	3,541	11,324	29,266	1,152	253,105	68,709	367	141,706	2,837,056
1877	4,950	17,461	14,518	225	.....	66,052	679	100,829	2,578,057
1876	5,625	8,712	18,234	2,282	.....	69,579	790	257,098	1,737,257
1875	4,273	.....	11,367	1,719	.....	75,104	1,216	260,644	172,617
1874	10,402	.....	5,527	1,627	.....	105,379	1,670	449,635	1,047,794
1873	9,297	.....	9,324	1,302	.....	142,865	4,810	423,683	1,373,909
1872	38,285	.....	12,219	3,917	.....	144,885	3,734	606,524	1,711,639
1871	45,908	.....	12,300	2,724	.....	132,249	2,651	621,716	309,677

Years.	Corn-meal.	Cotton.	Eggs.	Flour.	Hay.	Horses, mules.	Hogs.	Malt.	Oats.	
	<i>Bbls.</i>	<i>Bales.</i>	<i>Pkgs.</i>	<i>Bbls.</i>	<i>Bales.</i>	<i>Head.</i>	<i>Head.</i>	<i>Sacks.</i>	<i>Sacks.</i>	<i>Bush.</i>
1878	114,899	8,281	1,327	340,615	88,265	1,726	116	22,719	216,777	108,867
1877	139,472	1,738	1,325	344,152	52,752	1,520	168	19,035	152,782	.....
1876	167,984	6,439	1,322	452,011	63,873	2,451	120	18,277	272,371	.....
1875	137,460	730	1,898	505,111	74,106	1,780	1,112	20,260	284,972	.....
1874	160,586	2,902	4,825	762,324	56,873	2,404	5,803	28,883	408,288	.....
1873	112,499	.....	8,153	725,180	87,658	.....	7,187	38,198	430,202	.....
1872	91,888	.....	11,255	723,770	83,926	.....	8,303	27,553	461,998	.....
1871	66,744	.....	7,847	935,517	45,290	.....	7,897	19,768	371,986	.....

Years.	Onions.	Pork product.				Potatoes.	Rye.		Sheep.
		Pork.	Hams.	Meats.	Lard.		<i>Sacks.</i>	<i>Bush.</i>	
	<i>Pkgs.</i>	<i>Bbls.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Pkgs.</i>	<i>Sacks.</i>	<i>Bush.</i>	<i>Head.</i>
1878	1,622	50,753	1,118,455	10,268,607	6,562,732	4,612	5,459	609,041	75
1877	1,740	39,558	8,651,893	.....	6,840,683	8,270	8,450	171,843	88
1876	1,869	44,498	10,794,016	.....	6,401,535	8,718	306	.....	497
1875	1,759	36,180	9,268,964	.....	3,817,407	14,697	2,267	.....	462
1874	4,674	51,246	20,080,890	.....	6,506,250	20,474	8,293	.....	349
1873	5,025	65,453	28,106,200	.....	9,394,120	27,761	19,252	.....	1,035
1872	17,176	61,934	28,147,800	.....	12,413,380	37,717	13,353	.....	1,982
1871	10,204	80,496	21,000,900	.....	11,346,900	51,506	13,263	.....	3,214

Years.	Tallow.	Tobacco.		Wheat.		Whisky.	White lead.	Sundries.	Total.
	<i>Lbs.</i>	<i>Hhds.</i>	<i>Pkgs.</i>	<i>Sacks.</i>	<i>Bush.</i>	<i>Bbls.</i>	<i>Pkgs.</i>	<i>Pkgs.</i>	<i>Tons.</i>
1878	1,280,687	351	5,474	19,995	1,841,639	4,436	12,718	213,054	232,465
1877	4,000	87	3,096	3,421	351,453	4,317	17,459	153,683	260,005
1876	179,600	407	3,618	10	37,142	6,244	14,785	193,107	257,415
1875	.....	141	.....	97	135,961	5,721	.....	206,739	199,680
1874	.....	1,062	.....	3,077	365,252	7,614	.....	270,090	282,565
1873	.....	979	.....	1,352	.....	10,434	.....	260,453	309,915
1872	.....	598	.....	555	.....	12,124	.....	313,041	322,831
1871	.....	310	.....	1,353	.....	8,792	.....	303,656	293,708

APPENDIX No. 73.

Number of arrivals of steamboats and barges at Saint Louis, from 1848 to 1878, inclusive.

Years.	Steam-boats.	Barges.	Freight received.	Registered tonnage.
			<i>Tons.</i>	<i>Tons.</i>
1848.....	3, 468			688, 213
1851.....	3, 003			683, 140
1852.....	3, 187			735, 140
1853.....	3, 307			835, 397
1855.....	3, 449			918, 791
1856.....	3, 065			894, 462
1857.....	3, 415			964, 794
1858.....	3, 626			1, 181, 384
1859.....	2, 767	1, 141		1, 229, 826
1860.....	2, 972	1, 142		1, 227, 078
1861.....	2, 478	947		1, 086, 340
1862.....	2, 338	1, 133		1, 055, 795
1863.....	2, 789	1, 240		1, 225, 443
1870.....	2, 796	1, 195		1, 166, 889
1871.....	2, 574	1, 165	883, 401	
1872.....	2, 346	1, 485	863, 919	
1873.....	2, 316	1, 020	810, 055	
1874.....	2, 332	951	732, 765	
1875.....	2, 201	743	683, 525	
1876.....	2, 122	683	688, 753	
1877.....	2, 150	660	644, 485	
1878.....	2, 322	1, 291	714, 700	

APPENDIX.

APPENDIX No. 74.

Number of hands employed in manufacturing industry in Cincinnati for the years 1840, 1850, 1860, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, and 1877.

[From the thirteenth annual report of the Cincinnati Merchants' Exchange.]

Classification.	1840.	1850.	1860.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Iron.....	1,250	6,075	3,535	10,723	10,786	10,237	9,146	8,713	8,300	7,341	7,588
Other metals.....	1,466	9,921	770	1,736	1,829	1,573	2,144	2,147	2,534	2,405	2,564
Wood.....	1,426	3,798	770	7,847	8,091	8,294	7,011	7,977	8,024	5,788	8,686
Leather.....	1,888	2,472	2,253	5,312	5,067	5,209	4,601	4,929	5,342	5,491	5,553
Food.....	1,567	3,982	787	1,637	1,363	2,021	2,010	4,957	4,535	4,631	4,366
Soap, candles, and oils.....	1,142	750	889	1,217	936	1,011	948	1,043	1,067	1,196	1,071
Clothing.....	1,217	3,198	10,440	13,019	12,363	14,503	13,925	15,198	15,082	15,128	16,904
Liquors.....	1,110	963	632	2,428	2,301	1,888	1,870	1,835	1,816	1,772	1,841
Cotton, wool, hemp, &c.....	350	880	626	1,226	1,035	988	1,885	832	944	1,085	1,272
Drugs, chemicals, &c.....	114	304	418	1,697	735	602	274	590	591	611	624
Stone and earth.....	301	841	950	2,273	2,209	1,511	1,568	2,199	2,181	2,075	2,225
Carrriages, cars, &c.....	87	498	739	1,151	1,175	1,268	1,207	1,333	1,369	1,465	1,558
Paper, &c.....	512	1,073	229	535	452	432	1,224	662	901	961	1,999
Book binding and blank books.....	.....	.....	101	498	424	353	319	635	620	590	519
Printing and publishing.....	.....	.....	1,043	2,863	2,598	2,400	1,963	2,334	2,530	2,489	2,510
Tobacco.....	.....	.....	1,530	4,131	3,886	3,549	3,187	3,260	3,201	3,210	3,400
Fine arts.....	139	393	159	2,278	2,068	3,144	2,668	3,063	3,367	3,334	3,440
Miscellaneous.....	462	2,289	2,348	2,337	2,919	2,018	2,638	1,090	2,104	2,211	2,421
Totals.....	9,040	28,527	30,268	59,354	58,443	58,508	53,015	60,999	62,218	60,723	64,709

APPENDIX No. 75.

PORK-PACKING IN THE WEST FOR TWENTY-NINE YEARS.

Table showing the whole number of hogs packed in the West for the winter seasons of 1849-'50 to 1869-'70, inclusive, and for 1876-'77 and 1877-'78, as reported by the Cincinnati Price Current, and for the seasons of 1870-'71 to 1875-'76, inclusive, according to the reports of the superintendent of the Cincinnati Merchants' Exchange.

Years.	Hogs.	Years.	Hogs.
	<i>Number.</i>		<i>Number.</i>
1849-'50	1,632,220	1864-'65	2,422,770
1850-'51	1,332,867	1865-'66	1,785,955
1851-'52	1,182,846	1866-'67	2,400,701
1852-'53	2,201,110	1867-'68	2,781,084
1853-'54	2,534,770	1868-'69	2,499,873
1854-'55	2,124,404	1869-'70	3,635,312
1855-'56	2,480,502	1870-'71	3,023,404
1856-'57	1,818,468	1871-'72	4,782,403
1857-'58	2,210,778	1872-'73	5,456,004
1858-'59	2,465,532	1873-'74	5,383,819
1859-'60	2,350,822	1874-'75	5,537,124
1860-'61	2,155,702	1875-'76	4,850,192
1861-'62	2,893,686	1876-'77	5,101,308
1862-'63	4,060,520	1877-'78	6,505,446
1863-'64	3,261,105		

APPENDIX No. 76.

PORK-PACKING IN THE SIX PRINCIPAL CITIES OF THE WEST.*

Table showing the number of hogs packed in the six principal cities of the West, together with the average gross weight and yield of lard of all kinds, and gross price, for three winter seasons.

Cities.	Number of hogs.			Average gross weight.		
	1877-'78.	1876-'77.	1875-'76.	1877-'78.	1876-'77.	1875-'76.
				<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Cincinnati	632,302	523,576	563,359	284.06	274.71	273.68
Chicago	2,501,285	1,618,084	1,592,065	285.46	269.96	271.65
Saint Louis	509,540	414,747	329,895	270.02	258.02	268.47
Indianapolis	270,150	294,198	223,147	244.29	228.12	268
Milwaukee	371,982	225,598	323,184	290.8	277.16	251.25
Louisville	279,414	214,682	181,972	278.61	276.4	255.29
Total	4,564,673	3,291,065	3,213,622	281.18	266.38	268.45

	Average yield of lard, all kinds.			Average cost per 100 pounds gross.		
	1877-'78.	1876-'77.	1875-'76.	1877-'78.	1876-'77.	1875-'76.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Cincinnati	40.96	38.2	37.8	\$4 19.83	\$5 90.18	\$7 27.53
Chicago	39.6	35.1	36.32	4 12	6 00	7 21
Saint Louis	38.2	32.55	36.56	3 96	5 70	7 17
Indianapolis	32.05	26.5	32.4	3 94	5 84	7 35
Milwaukee	39.81	30.25	30.66	3 90	5 80	7 10
Louisville	34.83	32.62	30.63	4 35	5 64	7 00.8
Total	38.91	34	35.44			7 20.6

* The figures for 1877-'78 and 1876-'77 are those of the Cincinnati Price Current; prior to this, of the superintendent of the Cincinnati Merchants' Exchange.

APPENDIX No. 77.

Table showing the total number of hogs cut at Cincinnati each winter packing-season, in forty-six years.

[Compiled by the superintendent of the Cincinnati Merchants' Exchange.]

Years.	Number.	Years.	Number.
1832-'33	85,000	1855-'56	405,396
1833-'34	123,000	1856-'57	344,512
1834-'35	162,000	1857-'58	446,677
1835-'36	123,000	1858-'59	382,826
1836-'37	103,000	1859-'60	434,469
1837-'38	182,000	1860-'61	433,799
1838-'39	90,000	1861-'62	474,467
1839-'40	95,000	1862-'63	606,457
1840-'41	160,000	1863-'64	370,623
1841-'42	220,000	1864-'65	350,000
1842-'43	250,000	1865-'66	354,079
1843-'44	240,000	1866-'67	462,610
1844-'45	196,000	1867-'68	366,631
1845-'46	205,000	1868-'69	365,555
1846-'47	250,000	1869-'70	337,330
1847-'48	475,000	1870-'71	481,568
1848-'49	410,000	1871-'72	530,301
1849-'50	393,000	1872-'73	626,305
1850-'51	334,000	1873-'74	581,253
1851-'52	352,000	1874-'75	560,164
1852-'53	361,000	1875-'76	563,350
1853-'54	421,000	1876-'77	523,576
1854-'55	353,786	1877-'78	632,302

APPENDIX No. 78.

Tonnage built on the Western rivers during each year from 1850 to 1879, inclusive.

Years.	Steam.	Barges.	Total.	Years.	Steam.	Barges.	Total.
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons.
1850	17,493		17,493	1865			66,573
1851	27,283		27,283	1866			70,154
1852	40,256		40,256	1867			36,302
1853	37,994		37,994	1868	21,021	31,757	53,465
1854	37,965		37,965	1869	19,843	14,731	34,574
1855	23,439		23,439	1870	34,759	22,096	56,856
1856	37,410		37,410	1871	50,083	22,906	73,000
1857	42,199		42,199	1872	25,309	10,906	36,216
1858	33,749		33,749	1873	19,474	20,099	48,574
1859	17,713		17,713	1874	19,672	43,974	63,646
1860	32,109		32,109	1875	13,315	9,977	23,293
1861	29,960		29,960	1876	19,025	4,611	23,636
1862	8,783		8,783	1877	21,654	13,039	34,693
1863	27,470		27,470	1878	28,124	40,804	68,928
1864	53,865		53,865	1879	31,540	30,673	62,213

APPENDIX No. 79.

Tonnage built on the Northern lakes during each year from 1850 to 1879, inclusive.

Years.	Steam.	Sail.	Barges.	Total.
	Tons.	Tons.	Tons.	Tons.
1850				7,297
1851				7,861
1852				11,237
1853				31,364
1854				44,185
1855				45,423
1856				63,921
1857				51,490
1858				31,889
1859				6,132
1860				11,967
1861				23,405
1862				53,857
1863				64,964
1864				49,149
1865				36,330
1866				23,204
1867				37,612
1868	11,313	22,470	20,604	54,478
1869	14,961	13,338	21,159	49,458
1870	7,195	10,322	19,739	37,257
1871	12,292	13,839	17,764	43,897
1872	15,925	12,962	15,723	44,611
1873	21,418	40,839	30,189	92,447
1874	24,487	43,850		68,337
1875	12,489	12,269	5,162	29,921
1876	8,972	2,469	2,507	13,948
1877	3,802	2,696	552	7,040
1878	8,644	1,505	130	10,279
1879	11,542	1,173	579	13,294

APPENDIX No. 80.

Net receipts of cotton at seaports, from 1866 to 1879, inclusive, as stated by Mr. Henry G. Hester, secretary of the National Cotton Exchange of New Orleans.

Years.	Galves-ton.	New Or-leans.	Mobile.	Apalachi-cola.	Savannah.	Charles-ton.	Wilmington.	Norfolk.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
1865-'66	174,985	711,629	429,102	149,139	263,373	112,273	64,559	37,321
1866-'67	185,919	702,131	238,516	58,349	255,965	162,247	38,522	123,637
1867-'68	114,666	579,231	366,193	34,639	495,005	240,225	28,587	187,467
1868-'69	147,817	794,205	230,728	13,892	357,253	198,943	35,912	160,418
1869-'70	246,284	1,142,097	305,956	23,194	485,374	246,563	58,864	263,981
1870-'71	314,484	1,446,490	404,673	16,686	725,528	350,692	77,223	329,175
1871-'72	197,956	957,538	288,012	14,359	450,539	271,241	52,528	276,098
1872-'73	343,450	1,240,384	382,457	14,968	604,039	374,476	61,576	433,583
1873-'74	389,045	1,221,698	299,578	14,186	625,857	438,194	57,865	505,776
1874-'75	368,245	993,482	320,822	37,467	576,684	439,550	101,161	419,664
1875-'76	483,453	1,424,003	374,672	39,100	498,622	416,255	105,026	498,221
1876-'77								
1877-'78	454,137	1,391,519	419,071		597,449	425,648	123,422	435,714
1878-'79	564,309	1,187,365	362,010		690,177	500,420	109,325	443,285

APPENDIX No. 81.

The overland movement of cotton, from 1866 to 1879 inclusive, as stated by Mr. Henry G. Hester, secretary of the National Cotton Exchange of New Orleans.

Years.	Bales.
1866-66	211,885
1866-67	185,712
1867-68	374,860
1868-69	321,891
1869-70	322,386
1870-71	580,813
1871-72	341,080
1872-73	378,813
1873-74	489,534
1874-75	444,220
1875-76	695,622
1876-77	636,578
1877-78	832,137
1878-79	

APPENDIX No. 82.

Statement showing the number of bushels of wheat (including wheat-flour) exported from the United States from 1830 to 1879 inclusive.

[Barrels of flour reduced to bushels at the rate of 4½ bushels to the barrel.]

Year ended June 30—	Countries to which exported.						Total.
	Great Brit- ain and Ire- land.	British Pos- sessions in North Am- erica.	West Indies and Central America.	Brazil.	France.	All other countries.	
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1830	1,499,856	698,452	1,308,901	885,312	254,690	933,531	5,568,742
1840	3,410,107	3,012,206	2,052,884	890,991	335,715	557,711	10,259,614
1850	1,980,922	1,375,253	1,557,419	1,316,088		613,495	6,843,177
1860	3,765,017	4,899,810	2,209,640	2,259,558	28,589	2,744,721	15,907,335
1861	35,441,987	7,106,293	2,142,278	1,640,754	1,789,196	2,574,451	50,694,959
1862	32,963,012	7,812,330	2,425,628	1,679,859	10,180,160	4,177,731	59,258,720
1863	35,400,971	10,924,143	2,828,429	1,839,690	500,060	4,422,368	55,915,661
1864	22,487,892	8,013,490	3,192,037	1,835,883	363,114	3,797,367	39,689,773
1865	7,623,579	7,083,771	3,113,459	1,650,780	42,340	2,143,662	21,657,591
1866	2,582,906	5,633,490	2,416,745	1,332,648	360	3,437,779	15,402,828
1867	5,208,906	2,199,871	1,588,872	751,285	41,436	2,906,464	11,996,868
1868	14,549,623	4,808,326	2,890,401	1,114,402	314,799	2,107,251	25,284,802
1869	15,188,419	5,645,332	2,931,741	1,738,814	37,554	2,969,404	28,501,264
1870	33,137,888	8,654,303	3,435,344	1,692,976	1,166,856	4,081,746	52,169,113
1871	28,012,329	12,340,967	3,754,629	2,050,528	769,107	3,820,230	50,747,190
1872	20,495,859	6,096,938	3,773,858	1,719,972	1,430,799	4,221,061	37,738,487
1873	34,183,980	8,266,297	3,481,376	1,840,716	140	2,961,163	50,783,672
1874	59,501,210	10,708,170	4,158,151	2,396,205	2,256,036	10,443,579	89,463,351
1875	47,597,962	7,662,713	4,314,886	2,669,255	131,599	8,519,838	70,926,253
1876	48,264,984	7,952,721	4,428,545	2,412,810	531,126	9,202,740	72,782,926
1877	35,334,569	7,026,028	3,618,472	2,169,943	875,272	6,347,819	55,372,103
1878	61,934,347	7,544,066	3,190,036	2,825,117	4,339,090	10,285,233	90,167,950
1879	69,252,764	7,476,173	4,131,634	3,228,186	42,269,396	21,329,266	147,687,649

APPENDIX No. 83.

Statement showing the number of bushels of Indian corn (including Indian-corn meal) exported from the United States from 1850 to 1879 inclusive.

[Barrels of meal reduced to bushels at the rate of 4 bushels to the barrel.]

Year ended June 30—	Countries to which exported.						Total.
	Great Britain and Ire- land.	British Pos- sessions in North Am- erica.	West Indies and Central America.	Germany.	France.	All other countries.	
	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>	<i>Bushels.</i>
1850	5,989,886	524,440	865,371	1,895		251,268	7,632,860
1851	1,945,129	1,247,701	795,557	21,789	20	238,795	4,248,991
1852	8,138,866	2,178,576	875,699	28,730	13,731	255,884	11,491,496
1853	14,480,493	3,648,163	1,015,994	43,784	277,748	453,007	19,919,189
1854	10,793,027	4,719,699	960,037	45,761	73	632,681	17,151,268
1855	2,253,125	1,500,563	946,967	4,729	30	440,708	5,146,122
1856	765,205	1,669,838	886,128	12,818		277,413	3,610,402
1857	9,910,880	3,182,340	1,034,877	39,761		297,868	14,465,751
1858	12,206,784	2,726,142	827,046	22,720		245,255	16,026,947
1859	8,712,226	2,654,799	874,287	44,204	35,426	172,570	12,493,522
1860	4,274,807	2,673,016	891,887	120,451	54,889	271,615	8,298,655
1870	66,352	888,626	867,775	42,570	227	274,927	2,140,467
1871	5,910,325	3,247,881	1,090,209	113,728	77,771	233,639	10,673,553
1872	25,786,859	7,913,582	944,696	737,014	161,520	183,839	35,727,010
1873	29,338,499	8,411,435	1,489,505	363,110	134,937	416,888	40,154,374
1874	26,306,351	6,082,250	1,666,977	825,784	452,951	651,541	35,985,954
1875	23,403,431	3,809,276	1,092,340	957,822	346,456	416,211	30,025,036
1876	42,453,356	4,652,090	1,580,363	741,216	246,629	1,236,338	50,910,532
1877	55,504,403	10,136,161	1,215,794	2,137,992	1,363,281	2,304,980	72,632,611
1878	65,944,203	8,561,656	1,391,498	1,973,855	2,872,784	6,449,116	87,192,110
1879	64,525,543	8,144,735	1,619,264	3,894,671	2,564,346	7,156,333	87,884,492

APPENDIX No. 84.

Tonnage of the principal and other articles shipped east from Chicago during the year 1878 on the Lake Shore and Michigan Southern, the Michigan Central, the Pittsburgh, Fort Wayne and Chicago, the Pittsburgh, Cincinnati and Saint Louis, and the Baltimore and Ohio Railroads.

[Computed from data in Chicago Board of Trade Report, 1878.]

Articles.	Quantities.	Tons.
Flour.....	barrels..... 2,371,623	237,162.3
Wheat.....	bushels..... 10,018,880	300,508.4
Corn.....	do..... 13,504,458	378,124.8
Oats.....	do..... 10,169,886	162,710.1
Rye.....	do..... 380,470	10,653.1
Barley.....	do..... 1,006,827	45,763.8
Cattle.....	number..... 644,386	402,741.2
Sheep.....	do..... 137,991	6,899.5
Hogs, live.....	do..... 1,264,341	142,238.3
Hogs, dressed.....	do..... 24,568	2,763.9
Pork.....	barrels..... 193,236	80,917.7
Lard.....	pounds..... 669,459,168	334,729.5
Seeds, flax, &c.....	do..... 201,376,033	100,688.5
Seeds, other.....	do..... 19,979,154	9,989.5
Wool.....	do..... 28,564,241	14,282.1
Hides.....	do..... 42,053,907	21,026.9
Butter.....	do..... 45,516,980	22,758.4
Coal.....	do..... 42,241,397	21,120.6
Lumber.....	tons..... 2,119.0	2,119.0
Shingles.....	M..... 46,451	69,676.5
Cooper stock.....	M..... 3,446	1,723.0
Ties.....	tons..... 1,590.0	1,590.0
Beef.....	number..... 200	25.0
Canned meats.....	packages..... 58,712	2,935.6
Provisions and poultry.....	do..... 478,845	17,956.6
Tallow.....	tons..... 18,296.0	18,296.0
Grease.....	do..... 8,107.0	8,107.0
Cheese.....	do..... 6,515.0	6,515.0
Broom-corn.....	pounds..... 28,726,836	14,363.4
Beans.....	tons..... 4,201.0	4,201.0
Hops.....	bushels..... 2,688	80.6
Potatoes.....	pounds..... 1,599,801	799.9
Hay.....	bushels..... 225,290	6,758.9
High-wines.....	tons..... 2,074.0	2,074.0
Liquors.....	barrels..... 6,208	1,164.0
Horses and mules.....	do..... 93,520	17,535.0
Malt.....	number..... 5,875	3,231.2
Millstuffs.....	bushels..... 201,506	3,526.3
Salt.....	tons..... 46,746.0	46,746.0
Oil-cake.....	barrels..... 27,807	4,171.0
Lead.....	tons..... 9,751.0	9,751.0
Stone and marble.....	do..... 8,495.0	8,495.0
Pig-iron.....	do..... 2,327.0	2,327.0
Iron, miscellaneous.....	do..... 2,125.0	2,125.0
Silver and other ore.....	do..... 21,297.0	21,297.0
Furs.....	do..... 7,886.0	7,886.0
Cotton.....	pounds..... 726,166	363.0
Tobacco.....	bales..... 90,589	20,473.1
Tea.....	pounds..... 8,830,120	4,415.0
Coffee.....	do..... 9,070,739	4,535.3
Sugar.....	do..... 1,084,684	542.3
Syrup.....	packages..... 16,629	1,662.9
Corn and oat meal.....	do..... 2,570	385.5
Miscellaneous.....	barrels..... 53,022	5,302.2
Total.....	tons..... 314,989.0	314,989.0

APPENDIX No. 85.

Average monthly freight-charges per bushel on wheat from Chicago to New York by water (lakes, Erie Canal, and Hudson River), by lake and rail (lake to Buffalo and thence by rail to New York), and by all rail, from 1873 to 1878, inclusive.

Months	1873.			1874.			1875.		
	All water.	Lake and rail.	All rail.	All water.	Lake and rail.	All rail.	All water.	Lake and rail.	All rail.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
January.....			39			36			24
February.....			39			33.3			24
March.....			39			33			24
April.....			38.6			28.5			24
May.....	18.5	26.2	31	16.3	20	26.4	11.3	14.3	24
June.....	16.7	21.8	27	16.1	17.5	27	10.1	12.7	24
July.....	16.6	21.5	27	13.5	16.2	27	10.2	11.8	24
August.....	16.7	35.2	27	12.2	16	27	10.9	12	24
September.....	25.3	29.6	31.2	13.1	16.1	27	9.7	12.2	24
October.....	20.5	27.5	33	13.6	16.2	27	11.6	14.4	21.6
November.....	20.1	26.4	33	14.3	16.1	27	16.2	20.4	24
December.....			35.4			25		18.9	27

Months.	1876.			1877.			1878.		
	All water.	Lake and rail.	All rail.	All water.	Lake and rail.	All rail.	All water.	Lake and rail.	All rail.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
January.....			27			21			24
February.....			27			21			24
March.....			24.6			21			30.1
April.....			21.2			18.2	9.3	11.8	15
May.....	10.2	12.2	12	5.8	14.4	18	8.9	10.5	13.6
June.....	8.9	10.2	12	5	14	18	7.7	9.3	12
July.....	8	10	12	5.5	13.6	18	6.8	8.4	12
August.....	8	9.8	12	7.2	14.1	18	9.6	9.4	15.8
September.....	9	10.5	12	7.7	15.5	20.6	13.5	13.4	18
October.....	12.2	13	12	10.9	17.9	22.4	13	14.4	18
November.....	11.6	14.1	12	10.2	18.2	24	12.4	14	18.5
December.....		15	14.4		18.7	24			21

APPENDIX No. 86.
Shipments east from Chicago.

Month.	1876.			1877.			1878.		
	Wheat.		Corn.	Wheat.		Corn.	Wheat.		Corn.
	By lake.	By rail.		By lake.	By rail.		By lake.	By rail.	
January	Bushels. 136,573	Bushels. 885,735		Bushels. 110,508	Bushels. 1,043,365		Bushels. 1,043,365	Bushels. 1,043,365	
February	900,359	1,457,547		148,764	1,737,951		1,737,951	1,737,951	
March	435,356	1,148,400		83,834	1,036,282		1,036,282	1,036,282	
April	725,963	1,068,696		287,706	1,758,050		1,758,050	1,758,050	
May	827,787	2,865,477		270,110	962,938		962,938	962,938	
June	1,581,181	2,857,694		177,164	1,360,732		1,360,732	1,360,732	
July	2,455,059	973,972		119,343	799,758		799,758	799,758	
August	5,491,006	1,245,438		221,265	487,596		487,596	487,596	
September	478,630	1,513,668		283,873	1,921,173		1,921,173	1,921,173	
October	863,041	1,669,892		570,977	2,711,465		2,711,465	2,711,465	
November	752,649	1,914,485		149,561	2,251,987		2,251,987	2,251,987	
December	513,872	1,205,087		544,125	1,980,875		1,980,875	1,980,875	
Total	7,390,369	17,299,222		10,345,983	7,657,511		7,657,511	7,657,511	

The shipments by rail during four months, when navigation was closed, December to March inclusive, varied greatly in the past three years, being as follows:

Wheat, bushels.....	1876.	1877.	1878.
Corn, bushels.....	1,423,160	687,251	5,798,463
	4,704,769	3,676,200	6,469,601

APPENDIX No. 88.

NUMBER OF FREIGHT CARS EMPLOYED ON THE RAILROADS OF THE
DIFFERENT STATES AND SECTIONS OF THE COUNTRY, AS PRESENTED
BY H. V. POOR, ESQ., OF NEW YORK, IN HIS MANUAL OF THE RAIL-
ROADS OF THE UNITED STATES FOR 1879.

NEW ENGLAND STATES.

States.	Number of freight cars.	States.	Number of freight cars.
Maine	3,404	Rhode Island	350
New Hampshire	2,988	Connecticut	4,325
Vermont	2,995		
Massachusetts	16,476	Total	30,538

MIDDLE STATES.

New York	39,462	Maryland and District of Columbia ..	19,028
New Jersey	27,385	West Virginia (N.)	28
Pennsylvania	119,138		
Delaware	103	Total	205,144

SOUTHERN STATES.

West Virginia (S.)	2,150	Florida	487
Virginia	2,062	Alabama	2,813
Kentucky	5,502	Mississippi	194
North Carolina	1,235	Louisiana	2,483
Tennessee	2,334		
South Carolina	1,344	Total	26,447
Georgia	4,903		

WESTERN AND SOUTHWESTERN STATES.

Ohio	39,185	Nebraska	1,993
Michigan	12,699	Missouri	11,471
Indiana	16,992	Kansas	4,612
Illinois	38,447	Colorado	1,119
Wisconsin	7,806	Arkansas	607
Minnesota	3,964	Texas	4,296
Dakota Territory	333		
Iowa	3,351	Total	146,785

PACIFIC STATES.

California	4,928	Washington Territory	236
Nevada	506		
Utah Territory	753	Total	6,676
Oregon	251		

PACIFIC RAILROADS.

Union Pacific Railroad	3,201	Central Pacific Railroad	4,327
		Total	7,463

RECAPITULATION.

	Number of freight cars.	Per cent.
New England States	30,538	7
Middle States	205,144	48
Southern States	26,407	6
Western and Southwestern States	146,785	35
Pacific States	6,676	2
	415,550	
Pacific railroads	7,463	2
United States	423,013	100



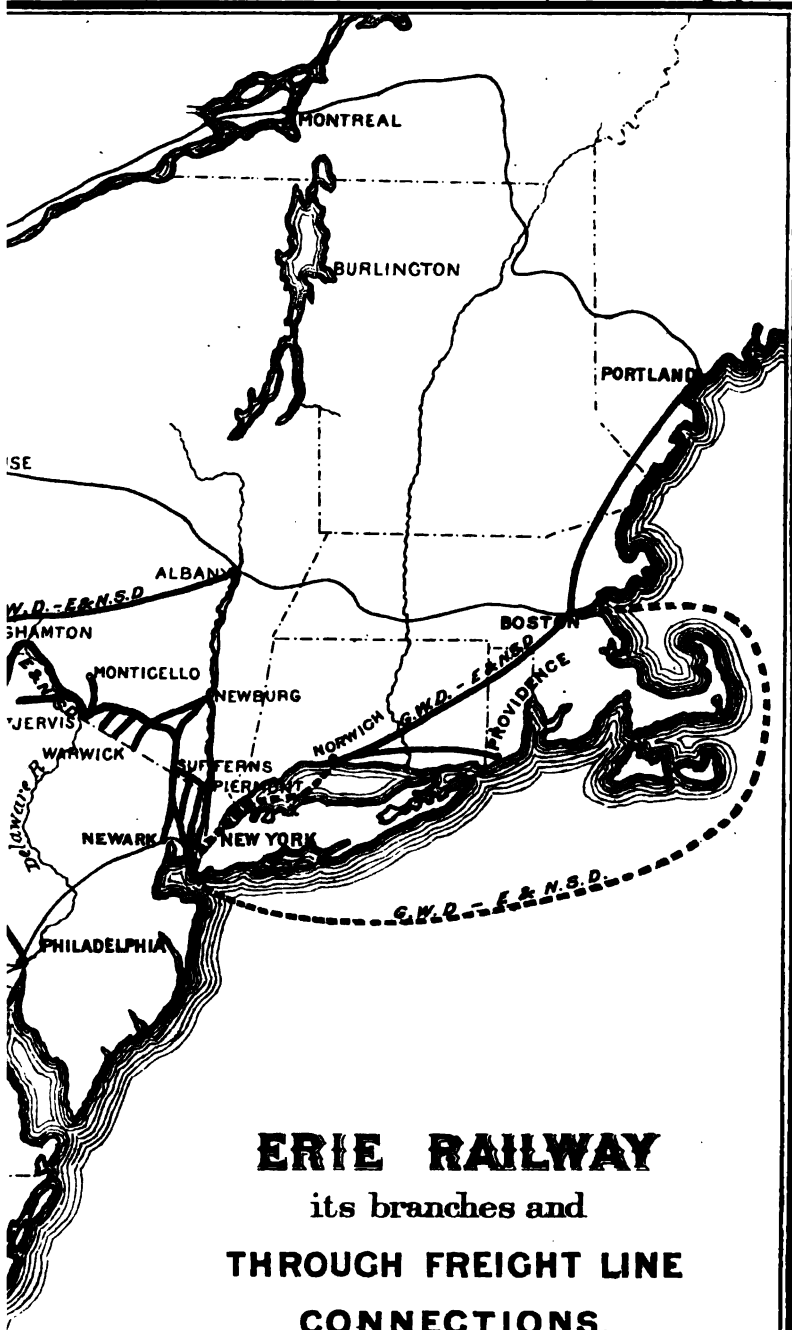
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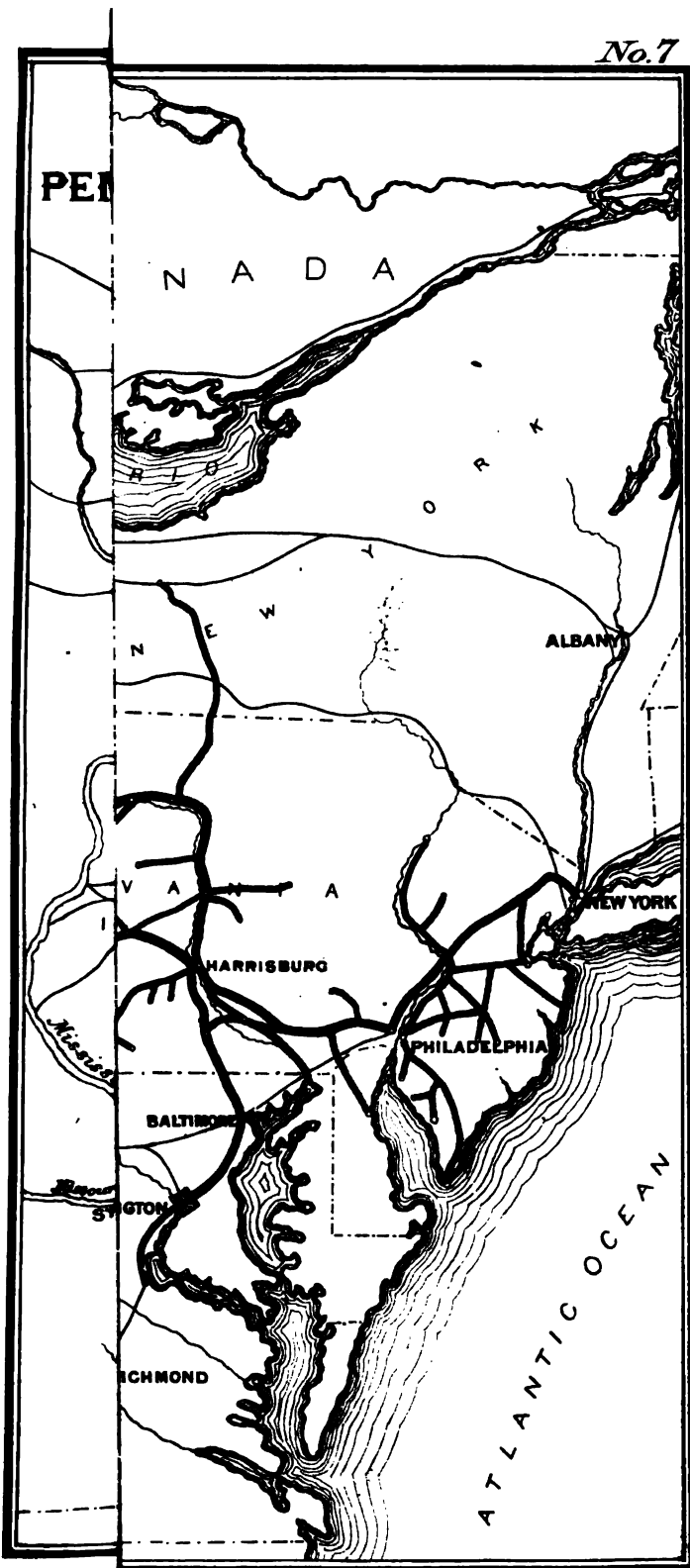




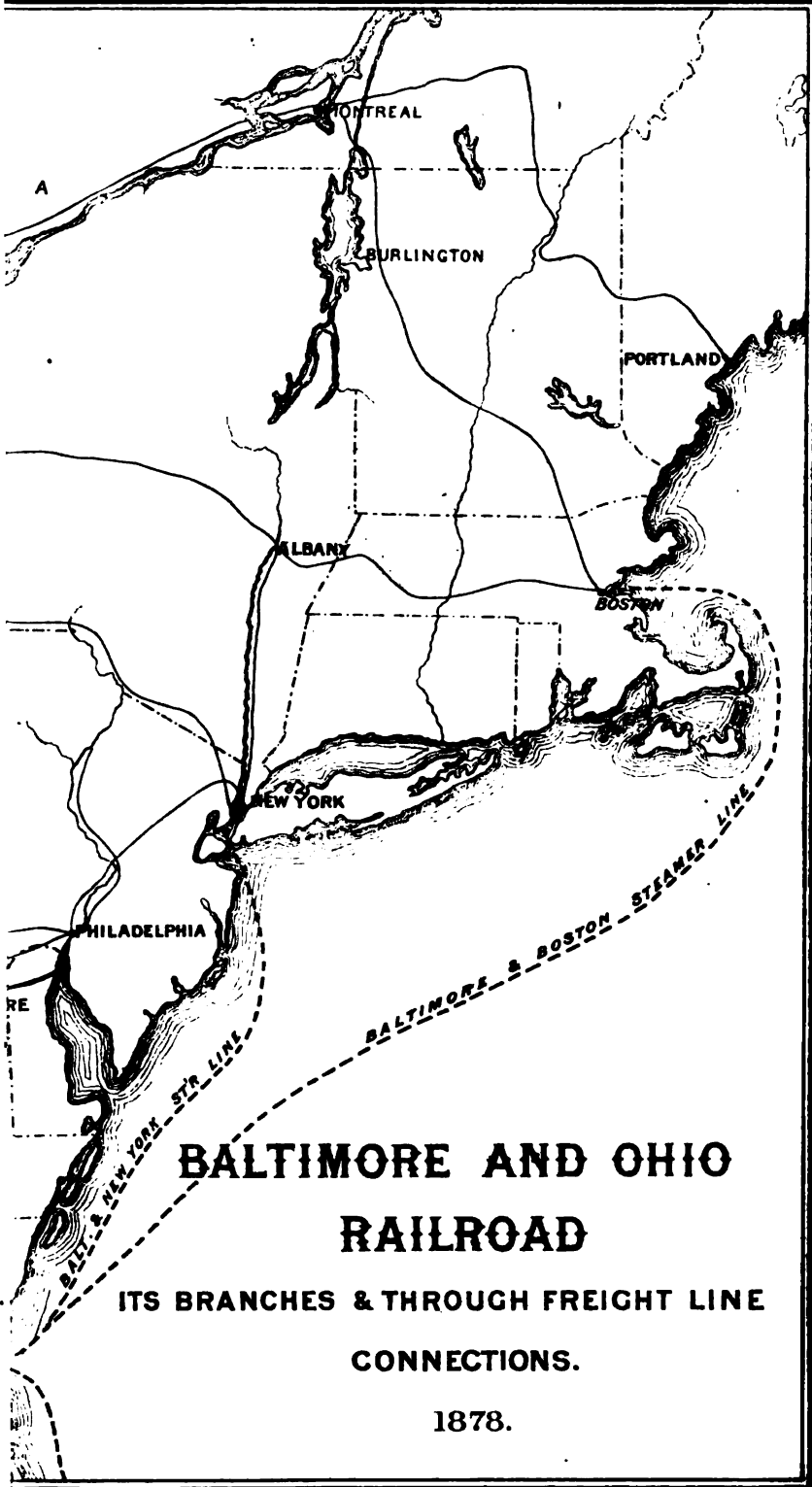
ERIE RAILWAY
its branches and
THROUGH FREIGHT LINE
CONNECTIONS.

1878.









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